Chapter 2

Frege on the Proposition and Its Parts

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Chapter 2

Frege’s on the Proposition and Its parts

1. Rejecting the empiricist framework

In the previous chapter we examined two attempts to develop an account of propositional and sub-propositional meaning within an empiricist framework. The empiricist framework, as we characterized it, is defined by an atomistic conception of sub-propositional meaning and by the correlative assumption that we must choose between two options: either words have a meaning that in no way depends on their propositional contexts, or words merely appear to have a meaning of their own—they may occur in intelligible sentences, but only as merely grammatical units that give no semantic contribution to the meanings of the wholes of which they are parts. The two accounts that we examined—proposed by Bentham and Russell respectively—turned out to be equally problematic (even though in different ways), and it seemed that the problems that each of them incurs cannot be solved by means of relatively local doctrinal fixes, but require the abandonment of the general philosophical framework that these accounts take for granted. We concluded therefore that there is good reason to look for an alternative framework and explore its potentialities.

The aim of this chapter is to show, first, that Frege provides such an alternative framework, and second, that it fares better than the one assumed by Bentham and Russell. The position that I want to attribute to Frege can be stated, in a nutshell, as follows: there is an essential interdependence between propositional and sub-propositional meaning. Frege rejects any atomistic conception of the meanings of words. Words, for Frege, have meaning only in the context of some proposition. Words have meaning only in so far as they give a semantic contribution to the expression of some propositional content. Another way of formulating the same point is to say that the meanings of words depend
on the meanings of the sentences in which they occur. But Frege recognizes, at the same
time, also an opposite direction of dependence: a sentence means what it does in virtue of
the meanings of the semantic units of which it is composed. For Frege, a sentence is
essentially articulated. This can also be put by saying that the meanings of sentences
depend on the meanings of their constituent words and on their mode of combination.

Frege, I shall argue, recognizes “contextually defined expressions” (in the sense
discussed in the previous chapter), i.e. sham semantic units that, in spite of grammatical
appearances, do not give any distinctive contribution to the expression of the contents
conveyed by the sentences in which they occur. Such expressions are indeed
characterized by the form of unilateral and despotic contextual dependence that may be
recognized by authors who work within the empiricist framework; but for Frege, this
form of contextual dependence—far from being taken as the general model of the
relationship between propositional and sub-propositional meaning, as happens in
Bentham—is a necessarily parasitical phenomenon. In the central case, the manifest
grammatical articulation of our sentences is also a semantic articulation of the contents
that they express. It is only against this background that we can make sense of words that
merely appear to be semantic units, and of sentences that manages to express a
propositional content even though they don’t do so in virtue of the meanings of their
constituent parts.

We can say that Frege’s approach differs from the views that are developed within
the empiricist framework because it recognizes a new region of possibilities. The
empiricist framework admits only unilateral forms of dependence between propositional
and sub-propositional meaning. For Frege, on the other hand, the relationship between
the meanings of words and the meanings of sentences is characterized by a form of
dependence that runs, at one and the same time, in both directions.

In the following sections, I will begin by examining separately Frege’s
commitment to each of these two opposite directions of dependence. As we will see,
there is a deep tendency to think that these two commitments of Frege’s are at least prima
facie mutually incompatible. One of the main challenges of Frege’s scholarship has been
identified, accordingly, with the task of devising a way of reconciling these two
problematic commitments. But I will show that this state of affairs does not testify so
much to the dubious coherence of Frege’s view, but rather to the strength of our inclination to assume that the empiricist framework is the only available option.

2. The “priority” of the complete proposition

There are several passages throughout Frege’s corpus that exhibit quite clearly his rejection of any atomistic conception of sub-propositional meaning. There are, in the first place, the various formulations of the context principle that occur in the *Foundations of Arithmetic*. The context principle is stated explicitly at least four times in that work:¹

1. In the enquiry that follows, I have kept to three fundamental principles:
   [a] always to separate sharply the psychological from the logical, the subjective from the objective;
   [b] never to ask for the meaning of a word in isolation, but always in the context of a proposition; [nach der Bedeutung der Wörter muss im Satzzusammenhange, nicht in ihrer Vereinelung gefragt werden]
   [c] never to lose sight of the distinction between concept and object.²

2. But we ought always to keep before our eyes a complete proposition. Only in a proposition have the words really a meaning. [Man muss aber immer einen vollständigen Satz ins Auge fassen. Nur in ihm haben die Wörter eigentlisch einen Bedeutung.] It may be that mental pictures float before us all the while, but these need not correspond to the logical elements in the judgment. It is enough if the proposition taken as a whole has a sense; it is this that confers on its parts also their contents. [Es genügt, wenn der Satz als Ganzes einen Sinn hat; dadurch erhalten auch seine Theile ihren Inhalt.]³

3. How, then, are numbers to be give to us, if we cannot have any ideas or intuition of them? Since it is only in the context of a proposition that words have any meaning [Nur im Zusammenhange eines Satzes bedeuten die Wörter etwas], our problem become this: To define the sense of a proposition in which a number word occurs.⁴

4. We next laid down the fundamental principle that we must never try to define

¹ I say “explicitly stated” because it seems possible to argue that the context principle is adumbrated also in other parts of the texts (e.g., at p. 59: “It should throw some light on the matter to consider number in the context of a judgment which brings out its basic use”); and I say “at least four times” because we might actually want to count two formulations of the context principle in the second quotation given below.
² Frege, *Foundations*, x.
⁴ Frege, *Foundations*, 73.
the meaning of a word in isolation, but only as it is used in the context of a proposition...

Wir stellten nun den Grundsatz auf, dass die Bedeutung eines Wortes nicht vereinzelt, sondern im Zusammenhange eines Satzes zu erklären sei.\footnote{Frege, \textit{Foundations}, 116.}

There are several differences between these formulations of the context principle.\footnote{For a helpful discussion of (some of) the differences between these formulations, see Rainer Stuhlmann-Laeisz, “The Context Principle,” in \textit{Building of Frege: New Essays on Sense, Content, and Concept}, ed. A. Newen, U. Nortmann and R. Stuhlmann-Laeisz (Stanford: CSLI Publications, 2001), 251-264.} The best thing to do, I believe, is to take the four formulations collectively and let them illuminate each other. But if I had to choose among them, the formulation that best encapsulates the insight that I am here concerned to discuss is the one that occurs in the third quotation (which is also generally regarded as the \textit{standard} formulation of the context principle: “It is only in the context of a proposition that words have any meaning”), or the almost equivalent formulation that occurs in the second sentence of the second quotation (“Only in a proposition have the words really a meaning”).\footnote{My choice to privilege these particular formulations has its rationale in the following asymmetry. While the other formulations can help to further clarify the insight encapsulated in the formulations that I am privileging, focusing exclusively on any of those other formulations can lead to a misconstrual of the import of the context principle. Thus the first and the fourth quotations can encourage, if taken by themselves, a \textit{merely epistemic} understanding of the context principle, according to which we shouldn’t look for the meanings of words in isolation because in natural language words are often ambiguous and sentential context is needed to carry out disambiguation. But the other formulations make clear that the reason why Frege thinks that we should not ask for the meanings of words in isolation is because words do not \textit{have} a meaning except as parts of meaningful sentences—and this is meant to apply to \textit{all} words (ambiguous or not), of \textit{any} language (natural or artificial). The formulation provided by the last sentence of the second quotation, on the other hand, if considered in abstraction from other views of Frege’s, can lead to an excessively strong construal of the context principle. The notion of “part” of a proposition is doing a lot of work in that formulation, and must be understood in the right way. As I will argue more extensively in Section 6.2, Frege view is that, if a sentence is meaningful, then its \textit{logical} (or semantic) parts also have a meaning. But he certainly does not believe that if a sentence is meaningful, then all its orthographical parts (such as letters), or visual parts (such as patches of color), also have a meaning of their own. Moreover, he doesn’t think that everything that \textit{looks} like a logical part of sentence is actually so: meaningful sentences (of ordinary language) can contain grammatical units that, in spite of appearances, do not have any meaning of their own.} By ruling out the possibility of words having meaning outside of propositional contexts, or “in isolation,” Frege is here stating that the meanings of words presuppose, or depends on, the meanings of the sentences in which they occur.\footnote{What should be meant, precisely, by “outside of propositional contexts,” or “in isolation,” is a delicate issue that will be discussed in later chapters. Even without such clarifications, the dicta under consideration suffice to support the claim that I want to make at this point—i.e. the claim that Frege recognized the dependence of the meanings of words on their propositional contexts. And this is enough to reject the atomistic conception of the sub-propositional meaning, for according to that conception there can only be an \textit{accidental} relation between the meaningfulness of a word and the
fact that it is a working part of a significant proposition.

Frege’s context principle can be given a richer formulation by making explicit reference to two other Fregean doctrines (which are related to the two other “fundamental principles” that Frege mentions in the Introduction to *Foundations*): (a) his view of propositional structure, and (b) the distinction between the logical and the psychological meanings of words.

For Frege there are two fundamental kinds of propositional components: “objects” and “concepts.” Objects can be figuratively characterized as “self-standing” or “complete” or “saturated”; they are designated by proper names, and their distinctive logical features include yielding a propositional content by falling under first-level concepts. Concepts can be figuratively characterized as “incomplete” or “unsaturated.” There are concepts of different levels, and concepts belonging to each level are unsaturated in a specific way. Frege discusses explicitly first-level, second-level and third-level concepts. First-level concepts are designated by first-level concept-words and their distinctive logical features include yielding a propositional content by having objects falling under them. Second-level concepts comprise the universal and the existential quantifiers; they are designated by second-level concept-words; and their distinctive logical features include yielding a propositional content by having first-level

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9 The following account of Frege’s view of propositional structure is based especially on Frege to Marty, 29 August 1882, in The Frege Reader, ed. M. Beaney (Oxford: Blackwell, 1997), 79-83; “Function and Concept,” ibid., 130-150; “Concept and object,” ibid., 181-193. I will ignore, for the sake of simplicity, Frege’s recognition of sub-propositional components designated by term-forming operators such as “the father of x” or “x².” It should be noticed, however, that this kind of component plays a very significant role in Frege’s mature philosophy, since he comes to regard concept-words as term-forming operators: concept-words designate functions from objects to truth-value and serve therefore to form complex proper names of The True and The False.

10 I use the expression “propositional content” (which is not Frege’s) to refer to the content of a complete declarative sentence. This corresponds pretty much to Frege’s early notion of “judgeable content” (the difference is that I don’t want the idea of propositional content to carry any implication about the question of the alleged separability of force and content.) After the introduction of the distinction between sense and reference, Frege’s early notion of judgeable content splits up into the *thought* expressed by a complete declarative sentence (which is composed out of the senses of the parts of the sentence) and the truth-value named by the sentence (which is determined by the references of the parts of the sentence). I have availed myself of a non-Fregean expression in order to abstract from this change in Frege’s terminology. We are here interested in what is common to Frege’s early and mature views, rather than in the elements of discontinuity. But I would like to stress that the brief reconstruction of Frege’s view of propositional structure that I am providing could be reformulated in terms of either terminology. (I will discuss in Section 7 some specific aspects of Frege’s mature view that are arguably in tension with his commitment to the context principle.)
concepts falling under (or “within”\textsuperscript{11}) them. Third-level concepts comprise second-order quantifiers (which quantify over first-level concepts); they are designated by third-level concept-words, and one of their distinctive logical features is to yield a propositional content by having a second-level concept falling under them. For Frege, any propositional content can be seen as the saturation of something incomplete—as the saturation of a first-level concept by an object, or as the saturation of an \(n\textsuperscript{th}\)-level concept by a concept of level \(n - 1\).

Now, according to Frege, when we speak of the “meanings of words,” we might want to speak about two very different sorts of things.\textsuperscript{12} We might want to speak about their “psychological meanings,” i.e. the mental pictures and feelings that we associate with them. By the time he writes the \textit{Foundations}, Frege reserves the term “ideas” for these psychological phenomena. Words can have a psychological meaning quite independently of their occurrence in significant propositional contexts. Psychological meanings, we could say, are characterized by an atomistic grammar. There is nothing intrinsically wrong, for Frege, in inquiring about the psychological meanings of words; but we must be clear about the fact that this sort of inquiry is completely irrelevant if we are interested in logical issues—i.e., if we are interested in assessing the truth of propositions and the validity of inferences (where “truth” and “inference” are understood, in turn, in their logical sense). If \textit{that} is our concern, then we should inquire about the logical—as opposed to the psychological—meanings of words. For Frege, sub-sentential expressions have logical meanings (they are logical units) if they designate some determinate object or \(n\textsuperscript{th}\)-level concept; and logical meanings, unlike psychological meanings, are characterized by a \textit{non-atomistic} grammar. Here the context principle helps to elucidate the distinction between the logical and psychological meanings of words just as much as the latter helps to clarify the import of the context principle. According to Frege, a word (i.e. a sound or inscription) is a logical unit (designating a concept or an object) only to the extent that it gives a determinate semantic contribution to the

\textsuperscript{11} At one point, Frege proposes to adopt the following terminological policy: objects \textit{falls under} first-level concepts, and first-level concepts \textit{fall within} second-level concepts (“On Concept and Object,” 189). In other works, however, he uses the verb “fall under” for both cases (see for example \textit{Foundations}, §53). To my knowledge, he never adopted a specific terminology for the relation between second-level and third-level concepts. In what follows, I will use the generic “fall under” to refer to that relation.

\textsuperscript{12} The following account is base especially on \textit{Foundations} (p. x, §§ 59-60) and “On Concept and Object.”
expression of a complete propositional content. Words can be identified as logical units only by attending at them as working parts of meaningful sentences. To take one of Frege’s examples, the word “Vienna,” taken by itself, can give rise to the mental image of a certain skyline; but it is not, as yet, a logical unit, as is dramatized by the fact that the word, while retaining the same psychological meaning, can actually function very differently in different propositions, sometime designating an object (as in “Vienna is a metropolis”), other times designating a concept (as in “Trieste is no Vienna”).¹³ In order to see the word “Vienna” as a logical unit, say as a singular term designating a certain city, we need to see it as contributing to the expression of some complete thought about Vienna. The propositional context is already presupposed by the (logical) meaningfulness of any sub-sentential component.

The fact that Frege describes concepts as “incomplete,” and objects as “complete,” shouldn’t mislead us into thinking that the context principle is meant to apply only to concept-words. No such restriction of scope is intimated by the several formulations of the context principle that occur in the Foundations, which always refer to “words” quite in general. Moreover, Frege anticipate this possible misunderstanding of his figurative talk and takes care of stressing that number-words (which, according to his account, designate objects) have meaning only the context of the proposition:

The self-subsistence [Selbständigkeit] which I am claiming for number is not to be taken to mean that a number word signifies something when removed from the context of a proposition, but to preclude the use of such words as predicates or attributes, which appreciably alters their meaning.¹⁴

This passage, taken by itself, leaves open the possibility that the context principle is meant to apply only to a sub-class of singular terms, that is expressions designating numbers; but if the passage is read against the background of Frege’s general formulations of the context principle, there is no real ground for such an interpretation. All words, for Frege, have meaning only in the context of the proposition. The point of Frege’s figurative talk (when he describes concepts as “incomplete” or “unsaturated” and objects as “complete” or “saturated”) is to elucidate the different logical behavior of

¹³ “On Concept and Object,” 189.
¹⁴ Foundations, §60.
concept-words and object-words; his metaphors are not meant to suggest that object-words, unlike concept-words, can have a meaning outside of propositional contexts.15

As it is often noted, the *Foundations of Arithmetic*, a relatively early work, is the only place where Frege explicitly endorses the context principle. But there are other claims that he makes throughout his career which reveal his constant commitment to an anti-atomistic conception of sub-propositional meaning. These two passages, for example, are taken from very early and very late Frege, respectively:

[I]nstead of putting a judgment together out of an individual subject and an already previously formed concept as predicate, we do the opposite and arrive at a concept by splitting up the content of possible judgment.16

What is distinctive of my conception of logic is that I begin by giving pride of place to the content of the word “true,” and then immediately go on to introduce a thought as that to which the question “Is it true?” is in principle applicable. So I do not begin with concepts and put them together to form a thought or judgment; I come by the parts of the thought by analysing the thought.17

The different terminologies that Frege employs in these passages signal various changes in his philosophical doctrines; but in spite of such differences (which need not concern us at this point), we can recognize the recurrence of the same fundamental commitment to the dependence of the meanings of words on the meanings of the sentences in which they occur.18

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15 This point has already been stressed by several commentators. See for example James Conant, “Wittgenstein on Meaning and Use,” *Philosophical Investigations* 21/3 (1998): 233n15.


17 “Notes to Ludwig Darmstaedter” (1919), in *The Frege Reader*, 253. For similar claims, see also Frege to Marty, 29.8.1882, in *The Frege Reader*, 81.

18 I should note that the relationship between the last two passages and the context principle (as stated in *Foundations*) is a debated issue in Frege’s scholarship. Those two passages are sometimes said to express the “priority principle,” i.e. the priority of judgment over concepts. Michael Dummett has argued that this principle is independent from the context principle and concerns the question of the extraction of “complex predicates” from complete sentences, whereas the context principle applies to all sub-propositional expressions (see Dummett, *The Interpretation of Frege’s Philosophy* [Cambridge, MA: Harvard University Press, 1981], especially pp. 295-296, 539). Hans Sluga, on the other hand, has argued that the context principle is simply a “logical consequence,” or a “linguistic version,” of the priority principle (see Sluga, “Frege Against the Booleans,” *Notre Dame Journal of Formal Logic* 28/1 [1987]: 86). I cannot engage in this controversy here. I will simply take for granted that the two passages quoted above express a manifest rejection of any atomistic conception of sub-propositional meaning. To the extent that they do so, they voice the same anti-atomistic contention that is also expressed by the various formulations of the context principle that occur in *Foundations*. 
We may characterize this commitment as a thesis about the *priority of the proposition*. Such a characterization can be helpful in several respects (especially to the extent that it suggests a connection with Kant’s thesis about the priority of judgment); but it can also be misleading. If we want to ascribe to Frege a thesis about the semantic priority of sentences, we need to be clear about the fact that it is a different sort of priority from the one that characterizes a position like radical Benthamite contextualism. A position of that kind, as we saw in the previous chapter, gives priority to sentence-meaning *at the expense* of word-meaning: the sentence as a whole has a meaning, but no real semantic articulation corresponds to its manifest grammatical articulation. But Frege rejects such a unilateral form of sentential priority. For Frege, words (at least in the central case) have *their own meanings* and give their own semantic contributions to the expression of propositional contents. This brings us to Frege’s commitment to the second direction of dependence that I mentioned above, namely the dependence of the meanings of sentences on the meanings of the words of which they are composed.

3. The “independent” meanings of words

There are many passages in Frege’s writings where he claims that words have a meaning of their own and that the meanings of sentences depend on the meanings of the words of which they are composed. Most famously, Frege emphasizes these ideas in some of his late writing, where he connects the semantic articulation of sentences to the productivity of language—i.e. to the fact that, given our mastery of a finite lexicon and a finite number of grammatical rules, we can form and understand an indefinite number of sentences, many of which have never been heard before. Here is a selection of relevant quotations:

…a proposition consists of parts which must somehow contribute to the expression of the sense of the proposition, so they themselves must somehow have a sense. Take the proposition ‘Etna is higher than Vesuvius’. This contains the name ‘Etna’, which occurs also in other propositions, e.g. in the proposition

‘Etna is in Sicily’. The possibility of our understanding propositions which we have never heard before rests evidently on this, that we construct the sense of a proposition out of parts that correspond to the words. If we find the same word in two propositions, e.g. ‘Etna’, then we also recognize something common to the corresponding thoughts, something corresponding to this word. Without this, language in the proper sense would be impossible. We could indeed adopt the convention that certain signs were to express certain thoughts, like railway signals (‘The track is clear’); but in this way we would always be restricted to a very narrow area, and we could not form a completely new proposition, one which would be understood by another person even though no special convention has been adopted beforehand for this case.20

It is remarkable what language can achieve. With a few sounds and combinations of sounds it is capable of expressing a huge number of thoughts, and, in particular, thoughts which have not hitherto been grasped or expressed by any man. How can it achieve so much? By virtue of the fact that thoughts have parts out of which they are built up. And these parts, these building blocks, correspond to groups of sounds, out of which the sentence expressing the thought is built up, so that the construction of the sentence out of the parts of a sentence corresponds to the construction of a thought out of parts of a thought. And as we take a thought to be the sense of a sentence, so we may call a part of a thought the sense of that part of the sentence which corresponds to it.21

It is astonishing what language can do. With a few syllables it can express an incalculable number of thoughts, so that even if a thought has been grasped by an inhabitant of the Earth for the very first time, a form of words can be found in which it will be understood by someone else to whom it is entirely new. This would not be possible, if we could not distinguish parts in the thought corresponding to the parts of a sentence, so that the structure of a sentence serves as a picture of the structure of the thought.22

Propositional contents are articulated into parts, and their articulation is mirrored by the grammatical articulation of the sentences that express them. All the previous passages were written after the introduction of the sense/reference distinction and are formulated in terms of that distinction. Words, according to Frege, have a sense of their own; the senses of words compose the senses of the sentences in which they occur, i.e. the thoughts that they express. When all the words that make up a sentence have reference in addition to sense, then they determine the reference of the whole sentence—i.e., they determine

20 Frege to Jourdain, Jan 1914, in The Frege Reader, 320.
21 “Logic in Mathematics” (1914), in Posthumous Writings, 225. See also ibid., 243.
whether the sentence designates The True or The False.

Frege’s commitment to the sub-propositional articulation of language emerges also in a variety of other contexts, where he is not immediately concerned to highlight the connection between the compositionality and the productivity of language. For example, in a short piece in which he summarizes his main logical doctrines, Frege remarks:

[A] thought is made of parts that are not themselves thoughts.

[…] Splitting up the thought expressed by a sentence corresponds to […] a splitting up of the sentence.

[…] We can regard a sentence as a mapping of a thought: corresponding to the whole-part relation of a thought and its parts we have, by and large, the same relation for the sentence and its parts.23

To the surprise of many commentators, these remarks occur only a few paragraphs after one of the passages that we discussed in the previous section, where Frege says that the distinctive feature of his logic is to begin with what is true or false, i.e. a thought, and then come to the parts of a thought by analyzing the thought.

In a different work, Frege formulates in a similar way the idea that the structure of sentences mirrors the structure of the thoughts they express—this time in the context of a discussion of the kind of definition that allows us to replace complex sub-propositional expressions with simple ones:

As a sentence is generally a complex sign, so the thought expressed by it is complex too: in fact it is put together in such a way that parts of the thought correspond to parts of the sentence. So as a general rule when a group of sign occurs in a sentence it will have a sense which is part of the thought expressed.24

Quite interestingly, Frege holds in this passage that it is only “generally” the case that sentences are complex signs; and in the previous remark, he says that the grammatical articulation of a sentence corresponds only “by and large” to the articulation of the thought that it expresses. I will come back below on the significance of these qualifications. For the moment, I am interested in bringing out as clearly as possible the

23 “Notes for Ludwig Darmstaedter,” 255.
idea that these qualifications are meant to modify: the view of sentences as made up of parts that have meanings of their own and that jointly determine the meanings of the sentences of which they are parts.

When Frege describes sentences as “complex signs,” he is not concerned with merely grammatical or orthographical or phonetic complexity, but with semantic complexity. In Frege’s mature view, the notion of semantic complexity has two aspects, corresponding to his distinction between sense and reference. The following passage from *The Basic Laws of Arithmetic* clarifies the notion of semantic complexity by focusing on the level of reference:

Any symbol or word can indeed be regarded as consisting of parts; but we do not deny its simplicity unless, given the general rules of grammar, or of the symbolism, the *Bedeutung* of the whole would follow from the *Bedeutungen* of the parts, and these parts occur also in other combinations and are treated as independent signs with a *Bedeutung* of their own.  

A referring sign should be regarded as “complex,” in Frege’s terminology, only if it is composed of parts with a reference of their own, which determine the reference of the whole sign. Since, for Frege, there is no reference without sense (words refer to objects and concepts *via* their senses), semantic complexity at the level of reference implies semantic complexity at the level of sense: a complex referring expression is made up of parts that have a sense of their own, jointly composing the sense of the whole sign. On the other hand, since Frege officially envisions the possibility of expressions that have sense but lack reference, a sign can be semantically complex at the level of sense even though it lacks complexity at the level of reference. Expressions such as “Odysseus set ashore at Ithaca,” or “The father of Odysseus,” have a complex sense, even though they don’t have a complex reference, since they lack reference altogether. So when Frege writes, in the passage quoted in the previous paragraph, that “a sentence is in general a complex sign,” he means that a sentence is characterized at least by semantic complexity at the level of sense, and possibly also by semantic complexity at the level of reference. In either case, the complexity that Frege ascribes to sentences is much richer than merely grammatical or orthographical complexity.

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It is worth stressing that in the passage from *Basic Laws* that we have just cited, Frege is not specifically involved in clarifying the nature of the semantic complexity of *sentences*, as opposed to the semantic complexity of sub-propositional expressions—for instance, of complex proper names. In fact, there is arguably no room, in Frege’s mature view, for a difference *in kind* between the complexity of sentences and the complexity of complex proper names. The former is officially treated as a special case of the latter: sentences are proper names singled by the fact that they name particular objects (either The True or The False), and by the fact that they have a sense that Frege calls a “thought.” This doctrine of Frege’s might be in tension with his commitment to the context principle. If sentences are just a species of proper names, then what can the point possibly be of insisting that words have meaning only in the context of meaningful propositions? Why should words have a meaning only when they are parts of…complex proper names? I share with many commentators the view that there is a deep tension in Frege’s thought here. I’ll come back on this issue in Section 7. For the moment, however, we can abstract from the difficulties that derive from Frege’s way of specifying the character of the semantic complexity of sentences and focus simply on the fact that he regards sentences as semantically complex signs.

An instructive illustration of the contrast between semantically complex and semantically simple signs is provided by a discussion that appears in the Appendix to the *Basic Laws*. Frege is considering the proposal to avoid Russell’s paradox (about the classes of classes that are not members of themselves) by regarding terms that purport to refer to classes (and to numbers, which Frege conceives as classes) as “sham proper names”:

[Suppose we] regard class names as sham proper names which would thus not have a Bedeutung. They had to be regarded as part of signs that had a Bedeutung only as wholes. Now of course one may think it advantageous for some end to form different signs that partly resemble one another, without thereby making them into complex signs. The simplicity of the signs requires only that the parts that may be distinguished within it should have no separate Bedeutung. On this view, then, even what we usually regard as a number sign would not really be a sign at all, but only an inseparable part of a sign. A definition of the sign ‘2’ would be impossible; instead we should have to define many signs, which would contain ‘2’ as an inseparable part, but could not be regarded as logically compounded of ‘2’ and
another part. It would thus be illicit to replace such an inseparable part by a letter; for as regard the content of the whole sign, there would be no complexity.²⁶

The proposal that Frege is here examining is, in essentials, the “virtual theory of classes” that we discussed briefly in the previous chapter (Section 5). The idea is that while class-terms may appear as parts of meaningful signs, they are themselves only pseudo semantic units devoid of a separate meaning (sense and reference). So sign of the form “{x: Fx} = {x: Gx}” is meaningful: it says, as a whole, that all Fs are Gs. But it does not mean what it does in virtue of the meanings of the signs “{x: Fx}” and “{x: Gx}”: these are sham proper names to be paraphrased away. Similarly, a sign of the form as “a ∈ {x: Fx}” says that a is F, but it does not do so in virtue of the semantic contribution provided by the sings “a” and “∈” and “{x: Fx}.” Even if we regard the previous sentence as logically composed of “a” and “… ∈ {x: Fx},” where the latter is a genuine concept-word (meaning the same as “… is F”), the apparent proper name contained in the concept-word will still be an inseparable part of a meaningful sign, devoid of independent semantic significance. Frege rejects this understanding of class terms and numerals on the ground that it is incompatible with some basic features of our arithmetical practices. Very far from a position like radical Benthamite contextualism (which extends to all sub-sentential expressions the status of sham semantic units), Frege is engaged in vindicating the importance of sub-propositional meaning.

The last passage that I would like to mention in this section occurs in the context of a criticism of “incomplete” or “conditional” definitions. For Frege, a proper definition must fix the meaning of a word in all its possible propositional contexts. For example, the definition of a concept must determine, for any object, whether it does or does not fall under the concept (a properly defined concept, as Frege puts it, must have “sharp boundaries”). Similarly, the proper definition of an object must determine, for any object, whether it is or it is not identical to the object being defined. Frege argues that proper definitions are necessary if we are interested in drawing inferences and carrying out proofs. He attacks, accordingly, the mathematical practice to provide “incomplete definitions” (e.g., to define “addition” initially only for natural numbers, and then “extend” its meaning by defining it for rational numbers, real numbers, vectors, and so

on). A proper definition, for Frege, must fix the meaning of a word once and for all; only in this way it succeeds in conferring to the word an “independent meaning,” which is necessary if we are going to use the word in inferences:

The task of our vernacular languages is essentially fulfilled if people engaged in communication with one another connect the same thought, or approximately the same thought, with the same proposition. For this it is not at all necessary that the individual words should have a sense and meaning of their own, provided only that the all proposition has a sense. Where inferences are to be drawn the case is different: for this it is essential that the same expression should occur in two propositions and should have exactly the same meaning in both cases. It must therefore have a meaning of its own, independent of the other parts of the proposition. In the case of incompletely defined concept-words there is no such independence: what matters in such a case is whether the case at hand is one to which the definition refers, and that depends on the other parts of the proposition. Such words cannot therefore be acknowledged to have an independent meaning at all. This is why I reject conditional definitions of signs for concepts.27

The requirement of complete of definitions is certainly open to dispute. (It is obviously unreasonable if applied to ordinary language, as Frege is ready to admit; and it in can perhaps be questioned even when applied to formal disciplines such as mathematics.28) We are not interested, here, in the requirement as such, but in some of the weaker theses that it implies. The requirement laid down by Frege shows that he recognized the phenomenon of sub-propositional meaning: words can have a meaning (i.e. a sense and reference) of their own and occur with the same meaning in a whole range of propositional contexts. Moreover, the rationale that Frege provides for his requirement shows that he regards the semantic articulation of sentences as a precondition for our capacity to draw inferences. There would be no such thing as a valid inference if sentences were not articulated into semantic units that they could share with one another. Take the following syllogism: “All men are mortals; Socrates is a men; therefore, Socrates is mortal”; this inference would not be valid if “Socrates” didn’t have the same meaning in the minor premise and in the conclusion, if “men” didn’t have the same

28 Peano, replying to Frege, argued that “extensions” of meaning happens all the time in mathematics. See Frege, Philosophical and Mathematical Correspondence, 119.
meaning in the two premises, and so on.29 This seems to be a sound point even if we drop Frege’s stronger claim that if words are the have a meaning, then we must determine in advance what is the semantic contribution that they give to all their possible propositional contexts.

From the various passages that we have considered, we can conclude that Frege is concerned to emphasize, in the context of a wide variety of discussions, that words have meanings of their own, that sentences are semantically articulated, and that their meanings follow from the meanings of their parts. He connects the semantic complexity of sentences to some central features of language, such as its productivity and its inferential interconnectedness. On some occasions, Frege argues that the semantic articulation of sentences is necessary for the purposes of a formal language specifically designed to recognize the validity of inferences; but as other passages clarify, Frege thinks that at least a certain degree of sub-sentential articulation is a constitutive feature of language in general (including our “vernacular languages”): sentences, he maintains, are “in general” complex signs; their grammatical structure corresponds “by and large” to the structure of the thoughts that they express; and without this articulation, “language in the proper sense would be impossible.”

Now we need to see how these ideas can be integrated with those discussed in the previous section.

4. The “notorious crux of Frege interpretation”

In the last two sections, we saw how strong is Frege’s commitment to each of the two directions of dependence that we distinguished at the beginning of this chapter, namely the dependence of the meanings of words on the meanings of the sentences in which they occur, and the dependence of the meaning of sentences on the meanings of the words of which they are composed. Frege asserts, on the one hand, that words have any meaning

29 But couldn’t propositions follow logically from one another, even if they are completely devoid of sub-propositional structure? To think that they could, would be to claim that we can completely divorce the concept of inference from the concept of formal validity; but the possibility of this separation is highly doubtful. We can give a simple name to each of the three propositions that jointly constitute the syllogism mentioned above—say “A”, “B”, “C.” Of course, “C” would still follow from “A” and “B”; but as Wilfrid Sellars once noticed, this inferential relation would be parasitical on the inferential relation that holds between the articulate sentences respectively encoded by “A”, “B” and “C” (cf. Wilfrid Sellars, *Empiricism and the Philosophy of Mind* [Cambridge, MA: Harvard University Press, 1997], §8.)
only in the context of a proposition and that he comes by the parts of the thought (and thus by the meanings of sub-sentential expressions) by analyzing the thought (expressed by a complete sentence). On the other hand, he also claims that sentences are (in general) build up of parts “with a meaning of their own”; he maintains that the meaning of a sentence “follows” from the meanings of its parts; he even describes thoughts as constructed out of “building blocks” that correspond (by an large) to the grammatical parts of the sentence.

It is widely maintained that these two sets of claims are at least prima facie mutually incompatible.\textsuperscript{30} As some authors have colorfully put it, reconciling Frege’s commitment to contextualism (which is supposed to place some kind of priority on propositional contexts) with his commitment to compositionality (which is suppose to place some kind of priority on propositional constituents) is “a notorious crux of Frege interpretation.”\textsuperscript{31}

Some commentators have tried to obviate the difficulty by adopting a developmental approach. They easily concede that Frege’s two commitments are mutually incompatible, and then they claim that Frege held each of them at a different time: early Frege endorsed contextualism, later Frege abandoned it and endorsed compositionality.\textsuperscript{32} However, there is no convincing textual evidence for this interpretation, which owes whatever plausibility it possesses to the apparent absence of a viable alternative. Several other commentators have tried to propose some form of reconciliation by going against, or beyond, Frege’s text.\textsuperscript{33} But only a few authors have

\textsuperscript{33} We will discuss and criticize some of these attempted “reconciliations” in the third chapter. We will consider the position proposed by Hans-Johann Glock, who argues that we should reject the literal formulation of the context principle and adopt a weaker view that recognizes only a general dependence of the meanings of words on their propositional contexts (words must be capable of contributing to the expression of complete thoughts, but they retain their meaning even when they are not actually fulfilling their potentiality). I count such a reconciliation among those that seek to redeem Frege’s position from its alleged inconsistency by substantially revising what he says. In the next chapter, we will also consider and
suggested that Frege’s claims, taken basically as they stand, articulate a coherent and even promising view; and this is the path that I will follow.34

The impression that Frege’s two commitments are, on the face of it, mutually incompatible is a symptom of the assumption that we must answer the following question one way or the other: “What comes first, according to Frege? The meanings of words, or the meanings of sentences?” To assume that this question is inescapable is to take for granted that there can be only unilateral and asymmetrical forms of dependence between the meanings of sentences and the meanings of their constituents words: (a) either words have an atomistic meaning that in no way depends on their propositional contexts—and the meanings of sentences are then supposedly obtained, somehow, by putting together these atomistic semantic units; or (b) the meanings of sentences are semantic monoliths that in no way depends on the meanings of their parts—and the meanings of these parts are then supposedly obtained, somehow, by segmenting the meanings of the sentences in which they occur. These two options are indeed mutually exclusive. But part of the reason why the study of Frege’s philosophy of language is so rewording is that it forces us to put in question this restricted conception of the relevant space of possibilities.

5. The proposition as an organic unity: three analogies

The two opposite directions of dependence between propositional and sub-propositional meaning that are recognized by Frege form a single and coherent view. This is possible because Frege is not engaged in describing unilateral directions of dependence that rule each other out. The two directions of dependence that Frege identifies should be seen as two conceptually inseparable aspects of a single phenomenon. Frege’s answer to the question, “What comes first, the meanings of words, or the meanings of sentences?” is: “None, they can only come together!” Of course, this is not so much an answer to the

34 I find an indication of this path in the works of Cora Diamond and Jim Conant, and before them, in some passages by Gilbert Ryle. See especially Diamond, The Realistic Spirit, 109-111; Conant, The Method of the Tractatus, 432n34; for Ryle, see the passage quoted in the next section.
question, but a way of rejecting the question altogether. Propositional and sub-propositional meaning can only be understood, according to Frege, in their mutual interdependence. The specification of each direction of dependence already involves an implicit reference on the opposite direction. Words, for Frege, have meaning only in the context of an intelligible proposition: we cannot so much as identify a linguistic expression as a semantic unit without attending to the specific contribution that it is giving to the some complete propositional content. Conversely, meaningful propositions are essentially articulated into parts: we cannot so much as identify a string of signs as a meaningful sentence without attending to the way in which its meaning is the result of the collaborative work of its semantic components. We have here to do with a non-atomistic notion of “part” (the parts of a proposition cannot be what they are except as parts of the appropriate wholes), a non-monolithic notion of “unity” (a proposition is a whole that is essentially articulated), and a notion of “complexity” that is different from the mere agglomeration of atomistically conceivable components. For Frege, we might say, the proposition is an organic unity.

In one of his early writings, Frege illustrates his view of the relationship between propositional and sub-propositional meaning by means of the following analogy:

[I]n the concept-script [the] designations [of properties and relations] never occur on their own, but always in combinations which express contents of possible judgments. I could compare this with the behaviour of the atom: we suppose an atom never to be found on its own, but only combined with others, moving out of one combination only in order to enter immediately under another. A sign for a property never appears without a thing to which it might belong being at least indicated, a designation of a relation never without indication of the things which might stand in it.  

Propositional contents are articulated into parts that they can share with one another; but these are not parts that can subsist outside of the appropriate contexts; rather, they can move out of one combination “only in order to enter immediately under another.” Frege’s picture, here, is nicely clarified by a passage from Gilbert Ryle:

Frege’s difficult but crucial point [is] that the unitary something that is said in a sentence or the unitary sense that it expresses is not an assemblage of detachable sense atoms, that is, of parts enjoying separate existence and separate thinkability,

35 “Boole’s Logical Calculus and the Concept-Script” (1880/1881), 17.
and yet that one truth or falsehood may have discernable, countable and classifiable similarities to and dissimilarities from other truths or falsehoods. Word meanings or concepts are not proposition components but propositional differences. They are distinguishables, not detachables; abstractables, not extractables [...].

Frege’s analogy of the atom lends itself to some misunderstandings, since physical atoms seem to be precisely the sort of things that enjoy, in Ryle’s words, “separate existence and separate thinkability.” To appeal to the image of the atom in order to illustrate an anti-atomistic contention might certainly appear as a rather peculiar procedure. But I believe that to focus on the fact that it is physically and certainly conceptually possible to have atoms outside of “molecular contexts” is to mistake the point of Frege’s analogy. In fact, he sets up the comparison by supposing that an atom is “never to be found on its own, but only combined with others.” I submit that the necessity of the connection between atoms and molecules that Frege is here taking for granted (whatever its precise nature might be) is meant to serve as a model for the conceptual necessity that, in his view, characterizes the connection between propositional and sub-propositional meaning.

The character of this connection is perhaps better illustrated by an analogy that Frege alludes to in a later work, where he compares the thoughts expressed by complete sentences to living organisms. He argues that it is hopeless to think that we can ever obtain a thought by heaping together psychological associations and ideas (which, as we observed above, are characterized for Frege by an atomistic grammar):

[...] if we go on and on heaping association upon association until the most complex and elaborate idea is formed, what purpose does it serve? Do we really think we should have a thought as a result? The result would no more be a thought than an automaton, however cunningly contrived, is a living being. Put something together out of parts that are inanimate and you still have something inanimate. Combine ideas and you still have an idea and the most varied and elaborate association can make no difference.

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37 The reading of the atom analogy that I am here criticizing has been defended by Øystein Linnebo (“Compositionality and Frege’s Context Principle,” unpublished, 5-6). For Linnebo, the point of the analogy is simply to illustrate the fact that the “representational powers” of words typically cannot be manifested on their own but only in the context of sentences, much like atoms typically cannot occur on their own but only bound together in molecules”—where “typically,” I take it, means something like “most of the time.”
38 “Logic” (1897), in *Posthumous Writings*, 144-145.
We may think that while a living organism is necessarily complex, the parts of which it is composed are what they are—namely limbs and organs such as arms, kidneys, and eyes—in virtue of the function that they fulfill within the whole living being.\textsuperscript{39} Frege thinks that, in a similar way, while the meaningful proposition is (in the central case) necessarily complex, the parts of which it is composed are what they are—namely logical units with a meaning of their own—in virtue of the semantic function that they fulfill within the whole meaningful sentence. We can see something as a living organism, or as a meaningful proposition, only if we see it as composed of parts whose identification already requires a reference to the whole of which they are working parts.

The same point is illustrated by Wittgenstein by means of a yet different analogy. Commenting on the import of the context principle, he remarks:

A word only has meaning in the context of a proposition: that is like saying only in use is a rod a lever. Only the application makes it a lever.\textsuperscript{40}

A metal rod is a lever in virtue of the function that it fulfills within a brake-involving mechanism; and a linguistic expression is a semantic unit in virtue of the determinate work that it is doing within an intelligible sentence. The same point that Frege was making by contrasting living organisms with automata can also be made, mutatis mutandis, by taking as one term of the analogy the relationship between an automaton and its functional parts.\textsuperscript{41}

6. Refining our account of Frege’s contextualism

We have now in view the central feature of Frege’s contextualism, namely the idea of the interdependence of propositional and sub-propositional meaning. Further discussion is required, however, in order to provide a fuller account of the character of this

\textsuperscript{39} Thus Aristotle could say that a hand that is not fulfilling its function as a part of a living body is a hand “in name only.” See for instance Politics 1253a19-25, in The Complete Works of Aristotle, ed. J. Barnes (Princeton: Princeton University Press, 1984), 2:1988.


\textsuperscript{41} For an elaboration of Frege’s and Wittgenstein’s analogies that is in line with the reading of the context principle that I am recommending, see Leonard Linsky, “The Unity of the Proposition,” 269.
interdependence. Two complementary issues need to be addressed here.

On the one hand, we need to clarify what Frege means, exactly, when he denies that words have any (logical) meaning “in isolation,” or “outside of propositional contexts.” Is he denying the truism that, given a word of a certain language, we can look it up in a dictionary and find out what its meaning is—or, normally, what its various and more or less related meanings are? Is Frege denying, as it were, the very possibility of dictionaries? Dictionaries, it would seem, give the meanings of words “in isolation,” in the sense that they specify the meanings of individual words rather than the meanings of complete sentences (that is the difference, after all, between dictionaries and travel phrasebooks); no relevant “propositional context” can be seen by looking, so to speak, “to the left or to the right”42 of the word that begins a dictionary entry. I shall postpone the discussion of this very common objection to the context principle to Chapter 4.

In the meanwhile, I will focus on the other issue that needs to addressed in order to provide a fuller account of Frege’s contextualism: What is the exact import of the claim, so far attributed to Frege, that meaningful propositions are “essentially articulated”? Does it mean, for instance, that every meaningful sentence must actually exhibit a sub-sentential semantic articulation? (In other words: Is Frege ruling out the possibility of single-word sentences?) Moreover: Does the “essential articulatedness” of sentences entail the fact that each propositional content has a unique sub-propositional structure? And should we expect a perfect correspondence between the manifest grammatical articulation of sentences and the logical articulation their contents? In the following sub-sections, I will discuss two areas of Frege’s philosophy that bear on these questions.

First, I will examine Frege’s recognition of contextually defined expressions as a feature of natural language (Sections 6.1-6.3). This will help to explain why Frege writes that the structure of sentences (of natural language) corresponds only “by and large” to the structure of the thoughts that they express. The systematic exclusion of contextually

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42 I am borrowing this phrase from Michael Thompson, who uses it for characterizing what he regards as a wrong conception of context and contextual dependence (see Life and Action [Cambridge, MA: Harvard University Press, 2008], 55). Thompson is concerned with a different sort of context than we are discussing in this dissertation, namely the context that allows us to understand something as a living organism or as a part of a living organism. However, there are some structural similarities between the view of life-context attacked by Thomason and the view of propositional context that sustains the idea that the context principle is refuted by the bare existence dictionaries. I’ll discuss these parallels in Chapter 4.
defined expressions—i.e. sub-sentential grammatical units that merely pass themselves off as semantic units—is one of the principles that govern the construction of a logical notation specifically designed for facilitating the recognition of valid inferences. I will submit that even though contextually defined expressions do occur, for Frege, in natural languages, they remain for him a necessarily parasitical phenomenon. Some meaningful sentences of natural language contain words that merely purport to be semantic units; their grammatical structure does not display the logical structure of their contents; but they are intelligible as meaningful sentences because they belong to a language whose manifest grammatical articulation is also, by a large, a genuine semantic articulation.

Secondly, we will discuss Frege’s doctrine of “multiple analyses” (Section 6.4). For Frege, the same thought can be analyzed in different ways; sentences with different semantic structures can express the same thought. There is an inclination to think that if sub-propositional articulation is essential to thoughts, then each thought must have a single identifying structure—and conversely, that if each thought is analyzable in an indefinite number of ways, then the very fact that thoughts are analyzable in one way or another must be regarded as a merely accidental feature of thoughts. If this assumption were sound, then Frege’s commitment to the multiple analyzability of thoughts would clash with his commitment to the articulate nature of thoughts. But I shall argue that the assumption is ungrounded. Frege can in fact maintain that thoughts must be analyzable in one way or another, according to what is required on each particular occasion. If we adopt this perspective, then we can describe cases where we express complete thoughts by means of simple signs that do not exhibit even an apparent sub-sentential articulation (which Frege explicitly recognizes as a potentiality of natural language) as limiting cases of the exercise of our capacity to entertain and express articulate thoughts.

6.1. Frege and contextual definitions

The first point that I want to argue for in this section is that Frege recognized contextually defined expressions (in the sense in which I have been using this term) as a feature of natural language. For Frege, there are, in natural language, words that occur in meaningful sentences but that, in spite of grammatical appearances, do not really have a
meaning of their own. The second point that I want to demonstrate is that this recognition is in no way in tension with the view that language (natural or artificial) is essentially articulated, and that propositional and sub-propositional are essentially interdependent. This is because Frege is committed to regard contextually defined expressions as parasitical cases. In order to establish the first and more modest point, we will consider Frege’s famous analysis of generality.

Frege’s analysis of generality in terms of variables and quantifiers (which is universally regarded as one of his major logical achievements) is in effect a way of paraphrasing away a certain class of misleading sub-sentential expressions that merely purport to have a meaning of their own. We ordinarily express generality by means of words that seem to function in sentences like proper names. We have “Everybody loves Mary,” and similarly we also have “Everybody loves somebody.” But the first sentence entails that Mary is loved by everybody, whereas it is a fallacy to infer from the second sentence that somebody is universally loved. By rewriting ordinary sentences containing expressions for generality into Frege’s conceptual notation, we won’t even be tempted to draw such fallacious inferences. There is no deceiving grammatical similarity in Frege’s notation that might lead us to fall into these fallacies. This comes out even more clearly if we consider a different example. The misleading grammar of ordinary expressions for generality has attracted the imagination of mankind at least since Omer’s time. Remember the episode of Ulysses who introduced himself to Polyphemus as Mr. Nobody. Polyphemus, after having been blinded by Ulysses and his friends, calls for help from his fellows Cyclopes, who can hear him through the closed entry of his cavern; the Cyclopes gather quickly outside of the cavern, but decide after all to leave the whimsical Polyphemus to his destiny, since he keeps insisting that NOBODY IS HURTING HIM. Of course, Ulysses could not have succeeded in his trick by introducing himself as Mr. “There is no X such that X is such-and-such,” since this Fregean paraphrase of a generic sentence containing the ordinary word “Nobody” does not even look like a name and could not, therefore, give rise to the potential ambiguity of the ordinary sentence “Nobody is hurting me” (which is read in two dramatically different ways by Polyphemus and by his fellow Cyclopes).

Words such as “all,” “some” and “nobody” are, for Frege, sham semantic units,
which give no real semantic contribution to the expression of the contents conveyed by the sentences in which they normally occur. These words of ordinary language are paraphrased away in Frege’s logical notation. A perfect logical notation, of which Frege’s Begriffsschrift aspires to be an approximation, should contain only genuine semantic units. In such a notation, we could simply read off (at least some of) the inferential relations of sentences from their superficial grammar. Grammar would be an infallible guide to logic: we could follow it blindly, and never fall into fallacies and ambiguities.

Even though ordinary language is far from realizing this ideal, a certain amount of genuine semantic articulation remains for Frege a constitutive feature of it. We can recognize some sub-sentential expressions of ordinary language as sham semantic units only because they belong to a system that contains genuine sub-sentential semantic units. If ordinary language contained no genuine semantic units, then we would have troubles seeing it as a language at all—and thus, a fortiori, as a language that fails to be logically perfect. As we saw above, Frege thinks that without sub-sentential semantic articulation “language in the proper sense would be impossible.” The grammatical structure of sentences must correspond, at least “by and large,” to the structure of the thoughts that they express. Without an approximate correspondence between grammar and content we start to loose our grip on the idea of full-blown though-expressing discourse. All we could have without such an approximate correspondence is “language” in an improper sense, i.e. a system of signals like the “language of brutes” that seduced so much Bentham’s philosophical thinking.

Admittedly, some of the passages that we have already encountered, in which Frege is concerned to contrast ordinary language with a proper logical notation, may invite a misunderstanding of Frege’s view of ordinary language. In the letter to Peano quoted in Section 3, in particular, Frege writes that the “task of our vernacular languages is essentially fulfilled if people engaged in communication with one another connect the same thought, or approximately the same thought, with the same proposition”; he goes on to claim that “for this it is not at all necessary that the individual words should have a sense and meaning of their own, provided only that the whole proposition has a sense”; he maintains that the case is completely different “where inferences are to be drawn”: in that case, we must use sentences composed of words with a sense and reference of their
own. Here it would seem that “the task” of natural languages has nothing do with the recognition of valid inferences, and that the need for a language with sub-propositional structure comes up, accordingly, only when we become interested in drawing inferences (presumably, when begin to engage in some sort of scientific investigation). If this were an accurate statement of Frege’s considered position, then Frege should easily admit the conceivableability of languages in which complete thoughts are always communicated by means of semantically simple signs; in fact, it would even seem that for Frege such an absence of compositional structure may actually characterize our actual natural language.

But the passage from the letter to Peano does not convey Frege’s considered position. As several other passages clarify, Frege thinks that the difference between ordinary language and a logical notation lies in the fact that the latter is exclusively designed for the facilitating the recognition of valid inferences, whereas ordinary language fulfills, in addition to that task, also a variety of other functions. In an early paper in which he explains the scientific value of his Begriffsschrift, Frege compares the “many-sided usefulness and potentiality for development” of ordinary language to the dexterousness of the human hand, which is adaptable “to the most diverse tasks”; his Begriffsschrift is like the tools that are designed to perform in an excellent way very specific tasks. In one of his last writings, Frege stresses that “[c]ertainly the logical disposition of man was at work in the formation of language but equally alongside many other dispositions—such as the poetical one.” This is why, he concludes, “[natural] language is not constructed out of a logical blueprint,” as his Begriffsschrift aspires to be. In many contexts, it doesn’t matter whether we express our thoughts in a logically fully perspicuous way. If we are writing a poem or a song, considerations of rhyme and metrics may actually justify us in using grammatical constructions that hide the logical articulation of the contents that we express. And if we want to communicate with a person who can barely hear us, we had better choose a very short and simple expression if we want to effectively get across our message (so “Slab!” rather than “Bring me a

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43 I disagree, therefore, with those interpreters who take this passage as a key entry for understanding Frege’s view of propositional and sub-propositional meaning (cf. Sluga, “Frege’s Alleged Realism,” 240).
45 “Sources of Knowledge of Mathematics and natural Sciences,” in Posthumous Writings, 269.
Slab!”, or a wave of the hand for “The track is clear™). But the truth of these considerations does not contradict in any way the idea that an approximate correspondence between the grammatical structure of sentences and the structure of the contents that they express is a constitutive feature of natural language.

A proper logical notation is, for Frege, a logical improved version of ordinary language. It is constructed by exercising the logical and inferential capacities that we acquire, in the first place, by learning a natural language. It is not a deus ex machina obtained by applying a radically new capacity, suddenly coming out from nowhere. Ordinary language is, for Frege, logically imperfect; but we recognize its imperfections and come up with improvements by working from within ordinary language itself. It is ordinary language that gives us the resources for rejecting some ordinary language expressions as sham semantic units that are used to express our thoughts in a logically unsperspicuous and confusing way.

In a number of suggestive passages, Frege describes the work of the logician, and more generally the work of the philosopher, as consisting for the most part of it in a “struggle against language.™ His logical notation is the result of his logico-philosophical struggle. This struggle may be described, for Frege, as a struggle of thinking against

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46 Cf. the passage from the letter to Jourdain quoted in Section 3.

47 Here is a representative selection of such passages:

If it is a task of philosophy to break the power of words over the human mind, by uncovering illusions that through the use of language often almost unavoidably arise concerning the relations of concepts, by freeing thought from the taint of ordinary means of expressions, then my Begriffsschrift, further developed for these purposes, can become a useful tool for philosophers. (Conceptual Notation, Preface, in The Frege Reader, 51)

Instead of following grammar blindly, the logician ought rather to see its task as that of freeing us from the fetters of language. For however true it is that thinking, at least in its higher forms, was only made possible by means of language, we have nevertheless to take great care not to become dependent on language; for many of the mistakes that occur in reasoning have their source in the logical imperfections of language. (Logic (1897),” in Posthumous Writings, 143)

If our language were logically more perfect, we would perhaps have no further need of logic, or we might read it off from the language. But we are far from being in such a position. Work in logic just is, to a large extent, a struggle with the logical defects of language, and yet language remains for us an indispensable tool. Only after our logical work has been completed shall we possess a more perfect instrument. (“My Basic Logical Insights,” in Posthumous Writings, 252)

…a great part of the work of a philosopher consists—or at least ought to consist—in a struggle against language. (“Sources of knowledge of mathematics and natural sciences,” in Posthumous Writings, 270)
language—as a attempt to free our thinking and reasoning from the “domination of words” and the “ fetters of language.”

But Frege regularly observes that this battle can only be carried out in language. For example, commenting on the challenges of a logico-philosophical investigation into the concept of number, we remarks:

These investigations are especially difficult because in the very act of conducting them we are easily mislead by language: by language which is, after all, an indispensable tool for carrying them out. Indeed one might think that language would first have to be freed from all logical imperfections before it was employed in such investigations. But of course the work necessary to do this can itself only be done by using this tool, for all its imperfections. Fortunately, as a result of our logical work we have acquired a yardstick by which we are apprised of these defects. Such a yardstick is at work even in language, obstructed though it may be by the many illogical features that are also at work in language.

Ordinary language has many logical imperfections; it doesn’t live up to the logical yardstick; but it is ordinary language that puts us in a position to build the yardstick in the first place! The yardstick, as Frege emphasizes, “is at work even in [ordinary] language,” even though in an imperfect way. The process of devising a logically perspicuous notation is then a process of improving ordinary language (with a particular purpose in mind, namely facilitating the recognition of valid inferences) from within.

This conception of the logical reform of natural language as proceeding from within natural language itself is not only endorsed by Frege at a theoretical level, but it informs as well his actual philosophical practice. Frege’s elucidation of the difference between objects and concepts is a perfect example. Natural language, he believes, often obscures this fundamental logical distinction. But in order to lead us to recognize this distinction—and to express it in a more perspicuous way by means of a proper logical notation—Frege draws on our command of the grammatical devices by means of which the distinction is expressed, even though imperfectly, in natural language. He appeals, as he puts it, “to the general feeling for the German language.”

The grammatical criterion that he provides is that “the singular definite article always indicates an object, whereas an indefinite article accompanies a concept word.”

In “The moon is white,” the word

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48 These locutions appear in the passages quoted in the previous footnote.
49 “Number,” in Posthumous Writings, 266.
50 “On Concept and Object,” in The Frege Reader, 184
51 Ibid. See also Foundations, §51, §66fn.
“moon” is part of a proper name designating an object; in “Io is a moon,” the same word is a part of a concept-word designating a concept. Frege stresses that this criterion is defeasible: in “The horse is a mammal,” for example, “the horse” designates a concept. In Frege’s conceptual notation there are no such exceptions, and the categorical distinction between objects and concepts is made perspicuous by the adoptions of different kinds of symbols for objects and concepts (lower case and capital letters respectively). But we can recognize the exceptions to the grammatical criterion and learn how to express the logical distinction in a more perspicuous way because we master an articulate language that is already (imperfectly) informed by our “logical disposition.”

The way in which Frege construes the contrast between natural language and a logical notation confirms, therefore, his commitment to the claim that natural language exhibits (and must exhibit) a large degree of genuine sub-sentential semantic articulation. Frege’s recognition of contextual definition as a feature of natural language in no way undermines the idea that language is essentially characterized by sub-propositional articulation.

6.2. Digression on a misleading formulation of the context principle in the Foundations of Arithmetic

Frege’s recognition of the logical imperfections of natural language sheds light on a potentially misleading formulation of the context principle that occurs in §60 of The Foundations of Arithmetic: “It is enough if the proposition taken as a whole has a sense; it is this that confers on its parts also their contents.” The soundness of this remark crucially depends on how the notion of “part of a proposition” has to be understood here. Clearly, from the meaningfulness of a sentence, it does not follow that, say, its letters have also a meaning of their own; and Frege is in no way committed to that bizarre idea. Moreover, as we have just seen, for Frege not everything that looks like a semantic unit of a meaningful sentence is in fact such a unit. So the notion of “part” that Frege is appealing to must be already characterized in logical terms; the context principle cannot really be understood as something that enables us to determine whether a “part” of a sentence specified in other terms (graphical, phonetic, or merely grammatical) is or is not
a semantic part of the sentence. Sub-propositional meaning cannot be unilaterally derived
from the meanings of complete sentences. We have here a reaffirmation of one side of
Frege’s fundamental commitment to the inter-dependence of the meanings of words and
the meanings of sentences.

The formulation of the context principle that we are discussing occurs in the
context of an overall argument that aims to establish that numbers are logical objects. A
mistaken interpretation of that formulation—which doesn’t acknowledge the heavy-duty
work that the notion of “part” is doing in it—can result from a failure to pay the due
attention to the details of Frege’s argument. A superficial reading of Foundations can lead
one to believe that Frege’s argument for the claim that numbers are objects is simply the
following: Numbers are objects because number words occur within meaningful
sentences as grammatical proper names. Under this (mis-)construal, the formulation of
context principle that we are here considering does all the job: the meaningfulness of the
sentence would guarantee that its grammatical parts are the semantic units that they
purport to be. But the actual structure of Frege’s argument is very different. He appeals to
the previous formulation of the context principle only to counter an objection to the claim
that numbers are logical objects—a claim that he takes to have already established in the
preceding sections on grounds that go well beyond the observation of a merely
grammatical fact.

Frege draws the conclusion that numbers are objects from an examination of the
logical behavior of number-words within complete sentences. This examination involves
a careful scrutiny of the inferential relations of sentences containing number-words.
Frege rules out as misleading the ordinary language use of number-words in adjectival
position, on the basis of considerations of the following sort.52 The two sentences (1)
“Jupiter has four moon” and (2) “Jupiter has large moons” have identical grammatical
structure. The word “four” appears to function logically as the word “large” does: it
appears to designate a concept that is predicated of some objects. But that can’t really be
the case. If it were the case, then from (1) we could infer (3): “Some moons of Jupiter are
four,” just as from (2) we can infer (4): “Some moons of Jupiter are large.” But (3)

52 Cf. Foundations, especially §§ 52 and 57.
doesn’t make any sense and there is no more than the shell of inference from (1) to (3).

Frege argues that the real logical role of number-words is revealed by mathematical equations and their everyday language equivalents, in which they manifestly appear as proper names flanking the identity sign. Grammatically misleading sentences such as “Jupiter has four moons” should be rephrased, accordingly, as “The number of Jupiter’s moons is four,” where the “is” is not the copula, but the identity sign, which is used to recognize an object as the same again.\(^{53}\) The sham concept-word “…is four” is paraphrased away from the original sentence, just as the sham proper name “nobody” is paraphrased away from the sentences in which it occurs by means of the variable-and-quantifier notation.

At the time when he wrote the *Foundations*, Frege didn’t see any logical reason for distrusting the grammatical use of numerals as proper names purporting to refer to objects (of a non-sensible kind)—as he thought that there are good logical reasons for distrusting the grammatical use of numerals as predicates purporting to refer to first-level concepts. The formulation of the context principle that we have been discussing in this section figures in his argument as a way of setting aside an objection that he considered to have no logical pertinence. The objection is that numbers cannot be non-sensible objects, because if they were we could not think or speak about them, since we could not form any mental idea or image of them.\(^{54}\) The gist of Frege’s reply—that “it is enough if the whole proposition has sense, and that it is this that confers on its parts also their meaning”—may be expressed in the following way: If everything behaves in the language as if an expression is a proper name designating an object (of a sensible or non-sensible kind), that it is a name designating an object (of that kind); metaphysical or psychological quibbles (about “what there really is,” or about what we can form a mental image of) are logically completely irrelevant.

It is important to see that this point, in and of itself, does not suffice to show that numbers are objects. It all depends on whether it is true that everything behaves in the language as if numerals are genuine proper names. As I have already pointed out, when he wrote the *Foundations* Frege didn’t see why this shouldn’t be the case. But several decades later, short before the end of his life, Frege came to wonder whether the

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superficial grammar of arithmetical equations and their ordinary language equivalents were not, after all, just as misleading as the grammar of sentences in which numerals are used in adjectival position. The grounds of this doubt didn’t have anything to do with metaphysical or psychological considerations, but were mainly connected to the discovery of Russell’s contradiction, which Frege eventually considered to have undermined the foundations of his philosophy of arithmetic. Perhaps there are real logical reasons for thinking that numerals are nothing but sham proper names. Perhaps we should reject as misleading both “Jupiter has four moons” and “The number of Jupiter’s moons = four.” Perhaps the only way to represent the content of these sentences in a logical perspicuous way (avoiding any kind of sham semantic unit) is to represent it as the subsumption of the first-level concept moon of Jupiter under a second-level concept instantiated four times. The previous sentences should be then rewritten, using contemporary notation, as $\exists x(Jx)$, where the numeral “4” is not a proper name with a meaning of its own, but a handy notational device that helps to construct concise signs for the relevant second-level concepts. On this view, the numerals that occur in statements of numbers are logically altogether dispensable: the previous sentence about Jupiter’s moon could be rewritten, in turn, by using only normal quantifiers: $\exists x \exists y \exists z \exists u(Jx \land Jy \land Jz \land Ju \land \neg(x=y \land x=z \land x=u \land y=z \land y=u \land z=u))$.55

Late Frege, to my knowledge, does not provide a determinate answer to these questions and does not elaborate any worked-out alternative to his previous attempt to...

55 In this paragraph I have been paraphrasing the discussion in “Notes for Ludwig Darmstaedter,” 256-257, culminating in the following questions, which Frege leaves unanswered:

How can we get from these concepts [i.e. second-order concepts such as $\exists x \ldots x$] to the numbers of arithmetic in a way that cannot be faulted? Or are there simply no numbers in arithmetic? Could the numeral help to form signs for these second level concepts, and yet not be signs in their own right?

Frege had already maintained, in the Foundations, that in a statement of number a first-level concept is brought under a second-level concept (see §46), but at that point he also believed that numerals must be recognized as genuine proper names. For the Frege of the Foundations, the sentence “$\exists x(x \text{ is a moon of Venus})$” expresses the same content as “The number of the moons of Venus = 0”; but he didn’t think that there is anything misleading with the superficial grammar of the latter sentence: the two sentences express two ways of carving up the same conceptual content (cf. §64 and our discussion below). Very late Frege, on the other hand, comes to wonder whether we should distrust the superficial grammar of the second sentence and simply consider it as a grammatical misleading way of saying what is appropriately expressed by the first sentence.

56 On the other hand, very late Frege does reject in a clear-cut way a closely related position that he had previously maintained. Frege had based his philosophy of arithmetic on the idea that extensions of concepts...
explain what he came to call the “miracle of number.” We are not interested, here, in whether Frege was right to abandon his former views, and in what the right view about the nature of numbers might possibly be. The trajectory of Frege’s position in the philosophy of arithmetic is instructive for our present purposes because it shows that there is no easy way to determine on independent grounds whether a certain grammatical unit is also a genuine semantic unit. Most definitely, this is not an issue that can be settled simply by observing that the a given grammatical unit occurs in complete meaningful sentences—as the formulation of the context principle that we have been discussing in this section might misleadingly suggest.

6.3. Context principle and contextual definitions: two terminological clarifications

So far I have attributed to Frege a form of contextualism according to which propositional and sub-propositional meanings are interdependent: propositions are essentially articulated into sub-propositional elements, but by elements that cannot be what they are except as parts of the appropriate wholes. Contextually defined expressions, which are recognized by Frege as a feature of natural language, should be regarded as parasitical cases. Now I would like to make two terminological remarks—about Frege’s way of characterizing contextually defined expressions, and about two different two different ways of talking of “contextually defined expressions”—that should further clarify the position that I am attributing to Frege.

are genuine objects (he actually defined numbers as extensions of concepts). But for very late Frege, Russell’s contradiction shows that expressions of the form “The extension of the concept Φ” are only sham proper names:

One feature of language that threatens to undermine the reliability of thinking is its tendency to form proper names to which no objects correspond. […] A particularly noteworthy example of this is the formation of a proper name after the pattern of ‘the extension of the concept a’, e.g. ‘the extension of the concept star’. Because of the definite article, this expression appears to designate an object; but there is no object for which this phrase could be a linguistically appropriate designation. From this has arisen the paradoxes of set theory from which have dealt the death blow to set theory itself. I myself was under this illusion when, in attempting to provide a logical foundation for numbers, I tried to construe numbers as sets. (“Sources of knowledge of mathematics and natural sciences,” in Posthumous Writings, 269)

57 “Notes to Ludwig Darmstaedter,” 256.
a) The first remark concerns the vocabulary that Frege employs in some early writings for describing the semantic status of what we have been calling contextually defined expressions. In his first book, *Conceptual Notation*, he writes:

The expression ‘every positive prime number,’ unlike ‘the number 20,’ does not by itself give rise to any independent idea, but *only acquires a sense in the context of a proposition.*

In another early writing, he remarks in a very similar vein:

*Out of context* the word ‘some’ *has no sense;* it is an auxiliary like ‘all’, ‘each’, ‘none’ and so on, which, in the context of a sentence, has a logical function to perform.*

The language that Frege employs in these passages for characterizing the status of ordinary words used to convey generality strongly recalls the formulations of the context principle that occur in *Foundations*. But we should not let ourselves be deceived but these verbal similarities. When he writes that the ordinary words expressing generality “only acquire a sense in the context of a proposition,” Frege is saying that these linguistic expressions do not have any meaning of their own. They occur in meaningful sentences, but give no genuine semantic contribution to the whole of which they are parts: a logical perspicuous notation must paraphrase them away. It would be a deep mistake to think that the context principle extends to *all* words the semantic status that Frege assigns to expressions such as “every positive prime number.”

To regard all words as having the status of contextually defined expressions is to embrace the form of contextualism that Bentham ends up with, namely a position that rules out the very idea of sub-propositional

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58 *Conceptual Notation*, §9, in *The Frege Reader*, 67; emphasis added.


60 This mistake is not uncommon among commentators. A very clear example is Michael Beaney’s commentary to the passage from *Conceptual Notation* that was quoted above:

This could be regarded as the first appeal in Frege’s work to the context principle—here governing only subject terms involving quantifiers such as ‘every positive whole number’ […] By the time of the *Grundlagen*, however, the appeal to the context principle has become generalized. (*The Frege Reader*, 67n31)
meaning; and I have been urging that the context principle encapsulates a different form of contextualism—one which is centrally concerned to *vindicate* the idea that words have (in the context of significant propositions) their own determinate meanings. We need to distinguish between the form of contextual dependence that Frege assigns to contextually defined expressions, and the form of contextual dependence that he assigns to all genuine sub-propositional semantic units.

The same kind of precaution is called for when we approach some of the writings of Bertrand Russell. In presenting his theory of descriptions, Russell insists that “denoting phrases” (which include expressions such as “every positive integer”\(^{61}\)) “are not assumed to have any meaning in isolation, but a meaning is assigned to *every* proposition in which they occur.”\(^{62}\) Similarly, in some later writings, Russell characterizes “incomplete symbols” (which include denoting phrases) as “things that have absolutely no meaning whatsoever in isolation but merely acquire a meaning in context.”\(^{63}\) Again, it might seem (and it is sometimes maintained\(^{64}\)) that Russell is here endorsing a version of the context principle—differing from the version that is formulated in Frege’s *Foundations* only in scope. But this is a deceptive appearance. The previous remarks show simply that Russell (like Bentham and Frege) recognized contextually defined expressions; but the form of contextual dependence that characterizes contextually defined expressions is utterly different from the form of contextual dependence that, according to the context principle, characterizes all genuine semantic units. In fact, as I argued in the previous chapter, there are independent reasons for thinking that Russell (like Bentham, and *unlike* Frege) works within a philosophical framework that leaves no room whatsoever for the form of contextual dependence that the context principle attributes to all words with a meaning of their own.

b) The second terminological remark that I would like to make concerns my claim

\(^{61}\) Russell distinguished two kinds of denoting phrases: expressions such as “some men,” “all men,” “every positive integer” (also called *indefinite descriptions*), to which Russell applies Frege’s variable-and-quantifier analysis; and expressions such as “The Present King of France” (also called *definite descriptions*), to which Russell applied his own original analysis.


\(^{63}\) B. Russell, *The Philosophy of Logical Atomism*, in *Logic and Knowledge*, 253. Russell goes on to say that incomplete symbols are “aggregations that only have a meaning in use and do not have any meaning in themselves.”

that Frege recognizes “contextually defined expressions” as parasitical features of ordinary language. Throughout these chapters, I have used the phrase “contextually defined expressions” to refer to sham semantic units that, in a perspicuous notation, are paraphrased away. Unless otherwise specified, I shall keep to this terminological policy. But in Frege’s scholarship, we often encounter discussions of “contextual definition” in quite a different sense. In *Foundations*, Frege considers the possibility of fixing the meaning of a term by fixing the meaning of an appropriate kind of sentence that contains it. For example, he discusses the proposal to define direction terms by means of the following stipulation: “the proposition ‘Line *a* is parallel to line *b*’ is to mean the same as ‘the direction of line *a* is equal to the direction of line *b*.’”\(^\text{65}\) In symbols:

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“D(*a*) = D(*b*)” is to means the same as “*a*/*b*”
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Similarly, Frege discusses the possibility of defining numbers in terms of equinumerosity by stipulating that “The number of Fs is equal to number of Gs” is to mean the same as “There is a one-to-one correlation between the objects falling under F and the objects falling under G.” Commentators usually refer to these stipulations as “contextual definitions” (of directions, natural numbers, etc.). Without questioning the legitimacy of such a usage, I want to signal that when Frege discusses these stipulations, he is not interested in “contextual definition” in the sense in which I have been using the term. Frege does not want to paraphrase away the left-hand side of these stipulations, showing that directions-words and number-words are only sham semantic units that have no meaning of their own. Quite to the contrary, Frege thinks that these stipulations achieve their goal only to the extent that they manage to fix the meanings of the singular terms appearing in the sentences on the left-hand side by “carving up in a different way” the content expressed by the sentences on the right-hand side.\(^\text{66}\) For Frege, direction terms and numeral are genuine semantic units, and he discusses “contextual definitions” of the re-carving sort only because he initially believes that they could be good candidates for specifying the independent meanings of those expressions.\(^\text{67}\)

\(^{65}\) *Foundations*, §65.
\(^{66}\) Cf. *Foundations*, §64.
\(^{67}\) For a discussion of the distinction between the two understandings of “contextual definition” that I have
Eventually, Frege discards this kind of stipulation, on the grounds that it determine the meanings of the definienda in (what he thinks is only) a restricted range of their possible propositional contexts. According to Frege, these stipulations aim—and fail—to generate genuine semantic units that can occur with the same meanings in all their intelligible propositional contexts.

It should be clear, therefore, that my previous claim about Frege’s recognition of “contextually defined expressions” as necessarily parasitical cases is not meant to apply to the status of expressions denoting abstract objects such as directions and numbers, which Frege hopes for a while to define by means of stipulations that are also known in the literature, appropriately enough, as “contextual definitions.” Frege’s discussion of this latter sort of “contextual definition” brings out his view about what sub-sentential expressions are in the central case (i.e. words and locutions with a meaning of their own), rather than his view about what such expressions can be in the parasitical case (i.e. words and locutions that merely appear to have a meaning of their own).

6.4. Multiple analyses and the essential articulatedness of thought

In the last few sections I have been arguing that Frege’s recognition of contextually defined expressions (as a feature of natural language) is quite compatible with one of the two central theses that I attributed to him, namely the thesis that propositions are essentially articulated into sub-propositional semantic units. The key, here, is to see that contextually defined expressions are, for Frege, necessarily parasitical cases. Now I want to discuss another doctrine that is often attributed to Frege and that might seem to be in tension with the idea that propositions are essentially articulated: the doctrine of multiple analyses.

been contrasting in this last paragraph, see Crispin Wright, Frege’s Conception of Numbers as Objects (Aberdeen: Aberdeen University press, 1983), 68ff. Wright speaks about an “austere” and a “non-austere” reading of contextual definition. These correspond, respectively, to the notion of contextual definition that I have been appealing to in the last two chapters, and to the notion of stipulation by re-carving that I have been discussing in this section.

68 Frege laments, for example, that the stipulation about directions quoted above does not determine the truth-conditions of a sentence such as “The direction of line a is identical to England” (see Foundations, §§56, 66). We need not to be concerned, here, with the soundness of Frege’s complaints; we are only interested in the kind of complaints they are—namely, complaints about a failure to fix the meanings of the relevant sub-sentential expressions.
The doctrine maintains that the same propositional content can be expressed by sentences that exhibit different semantic articulations: the same content can be analyzed in different ways, corresponding to the semantic articulation of the sentences that are used to express it. What this view exactly amounts to, and whether it was actually endorsed by Frege, is a controversial issue in Frege’s scholarship. The debate about it—which has involved some of Frege’s most prominent scholars, such as Peter Geach, Michael Dummett, Hans Sluga and David Bell, among others—is both extensive and complicated. One negative point, however, is clear: the doctrine of multiple analyses is not the mere view that different sentences of natural language, possessing a different grammatical structure, can express the same content. It is unquestionable that Frege subscribed to that view: explicit endorsements of it, as well as illustrative examples, can be found throughout his corpus.69 But given Frege’s recognition of the logical imperfections of ordinary language, the mere fact that some grammatically different sentences of natural language express the same content does not entail that they exhibit different logical analyses of the same content. Such sentences might exhibit, in spite of grammatical differences, the same semantic structure, and thus display only one semantic articulation of the same content. Alternatively, one of them (or perhaps even all of them) might exhibit only a sham semantic articulation: in that case, the fact that they manage to convey the same content would not prove that there is no unique way of articulating it. So, in order to have an instance of multiple analyses, we need two or more sentences that satisfy all the following conditions: (1) each of them must exhibit a genuine semantic articulation; (2) they must exhibit different semantic articulations; and (3) they must express the same content. Frege endorsed the doctrine of multiple analyses to the extent that he recognized—in theory or at least in practice—the possibility of sets of sentences

69 Here are some representative statements:

… we must not fail to recognize that the same sense, the same thought, may be variously expressed. (“On Concept and Object,” 184)

…we must never forget that that different sentences may express the same thought. (ibid., 188)

We know we can have various expressions for the same thought. The connection of a thought with one particular sentence is not a necessary one; but that a thought of which we are conscious is connected in our mind with some sentence or other is for us men necessary. (“Sources of Knowledge of Mathematics and the mathematical natural Sciences,” in PW, 269)
that satisfy all these conditions.

The apparent conflict between the doctrine of multiple analyses and the claim that propositional contents are essentially articulated is generated by the following assumption. We can be inclined to think that if there is no particular articulation which is the unique articulation of each propositional content, then propositional contents must be intrinsically inarticulate; and conversely, that if propositional contents are essentially articulated, then there must be one determinate articulation which is the real articulation of each content. This assumption, as we are going to see below, has tended to inform the debate on Frege’s alleged endorsement of multiple analyzability. My aim, in the rest of this section, is to examine the general dialectic of the debate and submit that we should reject its underlying assumption. We should be able to see that there is a position that Frege can occupy according to which propositions are essentially articulated, even though there is no absolute and unique way of articulating them. Propositions must be articulated—in one way or another. The choice of a particular articulation (the choice, we would ordinarily say, of a particular way of phrasing a thought) is mainly dictated by the need of making perspicuous some of its inferential relations. On different occasions, we might be interested in making perspicuous different sets of inferential relations, and thus opt for different ways of articulating our propositional content. We might even envision, as a limiting case, a situation in which the internal structure of a propositional content is irrelevant for our purposes (think for example about propositional logic, or about cases in which the perspicuity of inferential relations is not our main concern); in that case, we might choose a semantically simple sign for expressing what we want to say. In all these cases, it would still remain the case that propositional contents are essentially articulated. Our capacity for articulate thought and speech would still be operative in all the exercises of our capacity to think and speak; the point is just that what it takes to exercise the former capacity might assume different shapes on different occasions. My goal is to make available this picture both as a theoretical option and as a possible interpretation of Frege.

Let’s begin by looking at some examples discussed by Frege that, according to several commentators, are meant to illustrate the thesis that the same propositional content can be analyzed in different ways. We can distinguish at least three types of examples:
1) In *Conceptual Notation*, §9, Frege maintains that the proposition that Cato killed Cato can be “split up” in various equally legitimate ways.\(^7^0\) We can regard it as composed of the proper name “Cato” and the concept-word “ξ killed Cato” (were the Greek letter indicates the empty space that needs to be filled up or saturated by an expression designating an object); we can regard it as composed of the proper name “Cato” and the concept-word “Cato killed ξ;” or we can regard it as composed of the proper name “Cato” and the concept-word “ξ killed ξ” (where the use of the same Greek letter indicates that we need to saturate the concept-word with two occurrences of the same proper name). Even though these are the options explicitly mentioned by Frege in the passage that we are referring to, it is clear that for Frege such a list is not meant to be exhaustive. I the following diagram, I provide a synopsis of the analyses that we have just mentioned, as well as of other possible analyses carried out in Frege’s spirit; moreover, in accordance with Frege’s practice, I associate each analysis with one or more sentences of natural language that seem to highlight the particular method of analysis that is adopted in each case (even though it should be noticed that there is not always a natural way of doing this):

<table>
<thead>
<tr>
<th>Proposition</th>
<th>Alternative Analyses</th>
<th>Ordinary Language Paraphrases</th>
</tr>
</thead>
<tbody>
<tr>
<td>“Cato killed Cato”</td>
<td>- “Cato” + “ξ killed Cato”</td>
<td>- Cato killed Cato (?)</td>
</tr>
<tr>
<td></td>
<td>- “Cato” + “Cato killed ξ”</td>
<td>- Cato was killed by Cato</td>
</tr>
<tr>
<td></td>
<td>- “Cato” + “ξ killed ξ”</td>
<td>- Cato killed himself; Cato committed suicide</td>
</tr>
<tr>
<td></td>
<td>- “Cato” + “Cato” + “ξ killed ζ”</td>
<td>- Cato killed Cato (?)</td>
</tr>
<tr>
<td></td>
<td>- “ξ killed ξ” + CxΦx</td>
<td>- The concept killed oneself is instantiated by Cato; Having killed oneself is a property of Cato</td>
</tr>
<tr>
<td></td>
<td>...</td>
<td>...</td>
</tr>
</tbody>
</table>

According to Frege, all these different analyses do not affect the “conceptual content” of the original proposition; they merely reflect “our way of grasping it.”\(^7^1\) He explains that

\(^7^0\) *Conceptual Notation*, §9, in *TFR*, 66. Other analogous examples are discussed in the same section. See also “Boole’s Logical Calculus and the Concept Script,” in *Posthumous Writings*, 17; Frege to Marty, 28.8.1882, in *TFR*, 81; “On Concept and Object,” in *TFR*, 187-188.

\(^7^1\) *Conceptual Notation*, §9.
they are arrived at by regarding different parts of the original proposition as variable, while keeping the rest as constant. If we regard the first occurrence of the name “Cato” as replaceable by other proper names, and the rest of the propositions as constant, we obtain the first analysis indicated above; if we regard the concept-word “ξ killed ξ” as replaceable by other appropriate first-level concept-words, and the rest as constant, we obtain the last analysis indicated in the diagram; and so on. Commenting on a strictly analogous example, Frege states that he doesn’t “believe that for any judgeable content there is only one way in which it can be decomposed, or that one of these possible ways can always claim objective preeminence.”

Frege’s discussion of this first sort of example appears therefore to show that he is committed to the thesis that the same content can be articulated in different ways: we can combine different sets of sub-propositional components (different proper names, concept-words, and expressions for higher-level concepts), and yet express the very same content.

2) The second type of examples that we are going to consider are applications of the “recarving” process that we mentioned in the previous section. These are also known as applications of the “principle of abstraction.” Here are three examples discussed by Frege:

<table>
<thead>
<tr>
<th>Recarvings of the same content, in words…</th>
<th>… and in symbols</th>
</tr>
</thead>
<tbody>
<tr>
<td>a is parallel to b</td>
<td>a//b</td>
</tr>
<tr>
<td>The direction of a identical to the direction of b</td>
<td>D(a) = D(b)</td>
</tr>
<tr>
<td>All Fs are Gs</td>
<td>∀x(Fx ↔ Gx)</td>
</tr>
<tr>
<td>The extension of F is identical to the extension of G</td>
<td>ε′(Fx) = ε′(Gx)</td>
</tr>
<tr>
<td>There is a one-to-one correlation between the Fs and the Gs</td>
<td>∃R[∀x(Fx → ∃y(Gy &amp; xRy)) &amp; ∀y((Gy → ∃x(Fx &amp; xRy)) &amp; ∀x∀y∀z((xRy &amp; zRy) → (Fx → (Gz → (Gx → x=z))) &amp; (xRy &amp; xRz) → (Fx → (Gy → (Gz → y=z))))]</td>
</tr>
<tr>
<td>The number of Fs is identical to number of Gs</td>
<td>Nx(Fx) = Nx(Gx)</td>
</tr>
</tbody>
</table>

We have here three propositional contents, each of which is analyzed in two different ways. Concerning the first example, Frege writes, in *Foundations*, that “we carve up the content in a way different from the original way, and this yields us a new concept,” namely the concept of direction. This consideration is clearly meant to apply also to the

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73 *Foundations*, §64. Other analogous examples are mentioned in §§64-65.
third example, since Frege discusses directions in order to develop an analogy for his
treatment of numbers. Concerning the second example, Frege writes in “Function and
Concept” that each of the two sentences “expresses the same sense, but in a different
way.”74 Since the essay was already written in the light of the distinction between sense
and reference (according to which the sense of sentence is the thought it expresses, and
the its reference is the truth-value is designates), the remark asserts that the two sentences
not only agree in truth-value, but also express the same thought.75

There are several differences between the first and the second type of examples.
In the former case, we have an indefinite number of analyses of the same content,
whereas in the latter case we only have two analyses for each content. In the former case,
we seem to have a method for generating alternative analysis of any propositional content
initially expressed in an articulate way, whereas in the latter case the recarving process
applies only to propositional contents of a certain form (namely those involving an
equivalence relation). Finally, in the former case all the alternative analyses are obtained
from a single form of expression (say “Cato killed Cato”) by regarding each time
different parts of the expression as constant and variable; but there is nothing analogous
in the second type of examples. However, in spite of these differences, both types of
examples appear to show that, for Frege, the same content can be analyzed into different
sub-propositional elements.

3) Other examples discussed by Frege that seem to illustrate the doctrine of
multiple analyzes include the following:

<table>
<thead>
<tr>
<th>Alternative expressions of the same thoughts</th>
</tr>
</thead>
<tbody>
<tr>
<td>$p$ and $q$</td>
</tr>
<tr>
<td>$q$ and $p$</td>
</tr>
<tr>
<td>$p$ and $p$</td>
</tr>
<tr>
<td>$p$</td>
</tr>
</tbody>
</table>

74 “Function and Concept,” in TFR 136.

75 Frege regards the possibility of “transforming” sentences of the form “All Fs are Gs” into sentences
stating the identity of extensions as a fundamental law of logic and includes it among the axioms of his
formal system (the infamous Basic Law V; see Basic Laws, §§3, 9, 20). Given the remark from “Function
and Concept” that was cited above, some commentators have plausibly argued that Basic Law V
incorporates identity of sense as well as identity of truth-value (see Michael Beaney, The Frege Reader,
136n4, 213n26).
According to Frege, the first two pairs of sentences are cases “where two linguistically different expressions correspond to the same sense.”\(^{76}\) The sentence “p” and the sentence “p and p” express for Frege the same thought. And yet, it would seem that by Frege’s standards they should be regarded as exhibiting different logical structures. The same seems to hold for the third pair of sentences, i.e. the case of double negation, since Frege writes that “(not not B) has the same sense as ‘B.’”\(^{77}\) Finally, analogous consideration appears to apply to the last pair of sentences. Frege is very consistent in insisting that sentences of the form “p” and “It is true that p” express the same thought or content,\(^{78}\) moreover—to the extent that he regards the predicate “…is true” as a genuine concept word\(^{79}\)—he thinks that these sentences have different semantic structures.

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\(^{76}\) “Compound Thoughts,” 393, 393n21.

\(^{77}\) “Compound Thoughts,” 399. See also Conceptual Notation, Preface, in TFR, 51, where Frege endorses an axiom stating that p and not(not p) have identical conceptual content. However, Frege might not be completely consistent in his writings about the fact that a sentence and its double negation express the same thought. At the end of the essay “Negation,” for example, he writes that “of the two thoughts: A, and the negation of the negation of A: either both are true or neither is” (in Collected Papers on Mathematics, Logic, and Philosophy, 389). Here it would seem that there are two different thoughts that necessarily agree in truth-value. Some commentators, stressing this strand in Frege’s writings, have argued that Frege was not consistently committed, and had no need to be committed, to the thesis that a sentence and its double negation express the same thought: all he needed to maintain is that the two sentences are logically equivalent (cf. José M. Bermudez, “Frege on Thoughts and Their Structure,” Logical Analysis and History of Philosophy, 4 (2001): 87-105).

\(^{78}\) See “Logic” (1897), in PW, 141; “My Basic Logical Insights,” in PW, 251-252; “Thought,” in TFR, 328. Cf. also Conceptual Notation, §3, where Frege assumes that sentences of the form “p” and “It is a fact that p” express the same content.

\(^{79}\) Frege’s view of the nature of truth (and of the role of the predicate “…is true”) is a very complex issue that we cannot properly address here. At some points, Frege argues that the predicate “…is true” should be regarded as a concept word, even though a sui generis one: “All one can say is: the word ‘true’ has a sense that contributes nothing to the sense of the whole sentence in which it occurs as a predicate” (“My Basic Logical Insights,” in PW, 252). But it is only with great reluctance that Frege talks of truth as a property. After an inquiry into the peculiar logical features of the predicate “…is true,” Frege concludes: “The Bedeutung of the word ‘true’ seems to be altogether sui generis. May we not be dealing here with something which cannot be called a property in the ordinary sense at all? In spite of this doubt I will begin by expressing myself in accordance with ordinary usage, as if truth were a property, until some more appropriate way of speaking is found” (“Thought,” in The Frege Reader, 329). This reluctance on Frege’s part, as well as other aspects of his conception of truth (such as the idea that “the meaning of he word ‘true’ is spelled out in the laws of logic” [“Thought,” 326], and the claim that “the word ‘true’ seems to make the impossible possible: it allows what corresponds to the assertoric force to assume the form of a contribution to the thought” [“My Basic Logical Insights,” 252]), can be taken to show that Frege is not really committed to regarding truth as a property at all (cf. Thomas Ricketts, “Truth and Logic in Frege,” Proceedings of the Aristotelian Society. Supplementary Volumes 70 (1996): 121-140). If that is the case, then there might be grounds for arguing that in Frege’s view pairs of sentences of the form “p” and “It is
The debate about Frege’s alleged doctrine of multiple analyses has tended to polarize into two opposite camps. One camp attributes to Frege the claim that propositional contents are essentially articulated, but it also claims that Frege had no doctrine of multiple analyses. For Frege, it is maintained, there is a unique analysis for each propositional content: sentences with different semantic structures cannot express the same content. According to the opposite camp, Frege was committed to the multiple analyzability of propositional contents, but regarded these contents as intrinsically inarticulate. Sentences with different semantic structures can express the same content, because such a content is in and of itself unstructured. We will now look at the interpretation proposed by Dummett as an example of the former approach, and at the interpretations respectively advanced by Sluga, Geach and Bell as representatives of the latter.

Dummett attributes to Frege (or, perhaps, to Frege at his best) the following position: Each unambiguous sentence has a unique analysis that shows how its sense is determined by the senses of its ultimate constituents and by the way they are combined; the sense of the parts of the sentence are parts of the sense of the whole sentence; the sense of the whole sentence is the thought it expresses; each thought has therefore a unique identifying structure, which coincides with the unique semantic structure of the sentence that unambiguously expresses it. So there cannot be two or more sentences with different semantic structures that express the same thought. Dummett knows, of course, that he needs to account for what Frege says about each of the three types of cases that we considered above, since Frege’s remarks appears to show that he held precisely the opposite view. Here is the core of what he has to say about each type of case.80

Dummett argues that in order to understand what Frege writes about the alternative ways of analyzing a sentence such as “Cato killed Cato,” we need to introduce a fundamental distinction (not explicitly drawn by Frege) between the analysis and the

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decomposition of a sentence, and a correlative distinction between the constituents and the components of a sentence. The process of analysis shows how the sentence has been built up, in stages, out of its ultimate constituents. For each unambiguous sentence there is only one analysis, which specifies a unique set of ultimate constituents and a unique series of construction steps. For example, the constituents of “Cato killed Cato” are (presumably) “Cato,” “Cato” and “…killed …,” and the sentence is build up by filling up the argument places of the two-places first-level concept-word with the two occurrences of the proper name. Once we have a sentence and understand its sense as determined by its constituents and their manner of combination, we can then decompose the sentence (and the thought it expresses) in a variety of different ways and obtain a correlative variety of components. The process of decompositions consists in omitting from a sentence some or more significant expressions that occur in it, in some or all of their occurrences. The part that is left over is, for Dummett, a component but not a constituent of the sentence; Dummett also refers to it as a complex predicate (of first or higher level), as opposed to simple predicates, which are revealed by analysis. A complex predicates has empty spaces that need to be filled up by expressions of the same type as the expressions that we omitted, where all the empty places that were created by omitting more occurrences of the same expression must now be filled up by occurrences of the same expression. Dummett, following Frege, indicates the empty places of a complex predicate by means of Greek letters. Thus, once we have the sentence “Cato killed Cato,” we can decompose it in various ways, by omitting each time different significant parts of the sentence: we can decompose it into “Cato” and “Cato killed ξ,” or into “Cato” and “ξ killed ξ,” or into “ξ killed ξ” and CxΦx”, and so on. In each case, we obtain a different set of components. Decomposition does not bring out the building blocks out of which the sentence has been constructed, but patterns that the sentence may share with other sentences. For each sentence (and thought it expresses), there is only one analysis, which reveal its intrinsic structure, but an indefinite number of decompositions.81

Dummett emphasizes that the distinction between analysis and decomposition should not be confused with a distinction between complete and partial analysis. The

components obtained by decomposition need not figure at any stage of the process of analysis. The concept-word “Cato killed ξ,” to stick to our previous example, does not figure at any intermediate step of the analysis of “Cato killed Cato”: this is, by Dummett’s standards, an atomic sentence, and its analysis takes place in one single step. We don’t reach the constituent “…killed…” by first decomposing the sentence into “Cato” and “Cato killed ξ.” The point is even clearer if we consider the decomposition of “Cato killed Cato” into the first-level concept-word “ξ killed ξ” and the second-level concept-word “CxΦx” (call it the “Cato-quantifier”). Here we have no inclination to think that the constituent “…killed…” is reached by further analyzing the components that we must first obtain by applying such a method of decomposition. Analysis and decomposition, as Dummett puts it, are two different kinds of process.\footnote{Cf. Dummett, \textit{Frege and Other Philosophers}, 193, 301-302.}

Dummett explains that these two processes fulfill different functions. The aim of analysis is “to reveal the manner in which the sense of a sentence depends upon the senses of its parts.”\footnote{Dummett, \textit{The Interpretation}, 271.} In this way, analysis shows also how we understand a sentence given our understanding of its ultimate constituents and their manner of combination. Decomposition, on the other hand, serves at least the two following functions. In the first place, it generates complex predicates that can appear as constituents of quantified sentences and definite descriptions.\footnote{Cf. Dummett, \textit{The Interpretation}, 276.} From “Cato killed Cato” we can extract by decomposition the complex prericates “Cato killed ξ”; we can then attach to this expression a quantifier and obtain, say, “∃x(Cato killed x).” The complex predicate, which was only a component of the sentence from which it was extracted, is now a genuine constituent of the quantified sentence, since it figures at one stage of the analysis of the sentence. (However, since the complex predicate does not figure at the last stage of the analysis of the quantified sentence, it is not one of its ultimate constituents.)

A second function of decomposition, according to Dummett, is to “explain the validity of an inference in which the given sentence figures, or to exhibit such an inference as exemplifying some general pattern.”\footnote{Ibid., 273.} One way to explain the validity of an inference is to show that it exemplifies some valid general pattern. In order to explain

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\textit{Dummett, The Interpretation}, 271.
Ibid., 273.
through this method different inferential relations of the same sentence, we may have to decompose the sentence in different ways. Consider for instance these two inferences:

<table>
<thead>
<tr>
<th>Cato killed Cato</th>
<th>Cato killed Cato</th>
</tr>
</thead>
<tbody>
<tr>
<td>( \therefore ) Cato killed somebody</td>
<td>( \therefore ) Somebody killed Cato</td>
</tr>
</tbody>
</table>

The two inferences exemplify the same general pattern, namely the introduction rule of the existential quantifier:

\[
\text{Fa} \\
\therefore \exists x(Fx)
\]

But in order to show that the two inferences exemplify this very same pattern, we need to decompose “Cato killed Cato” in different ways: in the first case, we will regard it as composed out of “Cato” and the concept-word “Cato killed \( \xi \),” whereas in the second case we will regard it as composed out of “Cato” and “\( \xi \) killed Cato.” In many cases, moreover, the same inference can be naturally seen as exemplifying more than one general pattern. The choice of one particular pattern will then dictate different decompositions of the relevant sentences. Take the following inference:

<table>
<thead>
<tr>
<th>If anybody killed Cato, he is an honorable man</th>
<th>Cato killed Cato</th>
</tr>
</thead>
<tbody>
<tr>
<td>( \therefore ) Cato is an honorable man</td>
<td></td>
</tr>
</tbody>
</table>

If we see in the inference the following pattern (syllogism in Darii),

\[
\forall x(Fx \rightarrow Gx) \\
\text{Fa} \\
\therefore \text{Ga}
\]

then we need to regard the concept-words “\( \xi \) killed Cato” and “\( \xi \) is an honorable man” as
components of the first premise (thus decomposing it into these two first-level concept-
words and the second-level, two-places concept-word \( \forall x(\Phi x \rightarrow \Psi x) \)). But we can also
see the inference as carried out in two steps, each of which exemplifies a different
pattern: we first derive “Cato killed Cato” from the first premise by universal
instantiation, and then get to the conclusion by Modus Ponens:

\[
\text{Pattern:}
\]

If anybody killed Cato, he is an honorable man \( \forall x(Fx) \)
\[ \therefore \text{If Cato killed Cato, Cato is an honorable man} \quad \therefore Fa \]

\[
\text{Pattern:}
\]

If Cato killed Cato, Cato is an honorable man \( p \rightarrow q \)
Cato killed Cato \( p \)
\[ \therefore \text{Cato is a honorable man} \quad \therefore q \]

If we choose to explain the validity of the inference in this way, we don’t need to see the
concept-words “\( \xi \) killed Cato” and “\( \xi \) is an honorable man” as components of the
quantified premise; we only need to decompose it into the second-level, one-place
concept-word \( \forall x(\Phi x) \)” and the first-level concept-word “If \( \xi \) killed Cato, then \( \xi \) is a
honorable man.”

We don’t need to enter any further into the details of Dummett’s distinction
between analysis and decomposition. The sketch that I have provided should suffice to
show how the distinction is supposed to accommodate into Dummett’s interpretation
what Frege has to say about the first type of cases that we distinguished above. Each
propositional content has a unique sub-propositional structure, which is revealed by the
analysis of the sentence that expresses it; but each propositional content (and the sentence
that expresses it) can be decomposed in an indefinite number of ways.

Dummett is well aware, however, that he cannot deal in the same way with the
second type of case. The different recarvings of the same content that Frege discusses in

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86 Dummett does not put the issue exactly the way I did. However, this seems to me the point that is making
about the connection between decomposition and inference.
Foundations and elsewhere are not obtained by decomposition. There is no single sentence from which we can obtain both “a//b” and “D(a)=D(b)” by applying to it different methods of decomposition. By analyzing (as opposed to decomposing) each of the two sentences, we don’t reach a single set of ultimate constituents. Analysis shows that the semantic structures of the two sentences are genuinely different; and yet Frege says that they express the same content or sense. Dummett’s way of dealing with Frege’s remarks, here, is quite straightforward: he dismisses them as local aberrations. Dummett maintains that Frege’s statements—to the effect that by transforming a sentence such as “a//b” into a sentence such as “D(a)=D(b)” we “carve up the content in a way different from the original one,” and express “the same sense, but in a different way”—are “too strong” and “embod[y] an exaggerated claim.” Dummett argues that Frege was misled by a “false analogy” with cases in which the same sentence (and the thought it expresses) is decomposed in different ways. Frege should have recognized from the very beginning that “a//b” and a “D(a)=D(b)” (as well as any other pair of sentences of the same form) exhibit different semantic structures and express, accordingly, different thoughts. Dummett argues also that Frege, by the time he wrote Basic Laws, abandoned his previous incorrect view and got rid of any claim that is incompatible with the idea that thoughts have a unique identifying structure.

In order to deal with the third type of cases that was distinguished above, Dummett adopts a yet different strategy. He introduces a distinction (not explicitly drawn by Frege) between essential structure and form of representation. The essential structure of a sentence is what accounts for the way in which the sense of a sentence depends upon the senses of its constituents. The form of representation is the particular grammatical construction that we adopt in order to represent a certain essential structure. The idea is that different sentences can have the same essential structure, even though they represent it in a different way. This is what happens, according to Dummett, when we express a

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87 See Dummett, The Interpretation, 332-336; Frege and Other Philosophers, 292-296.
88 Frege and Other Philosophers, 293.
89 The Interpretation, 335.
90 Frege and Other Philosophers, 295.
91 Ibid., 293. Dummett rejects, therefore, the view that Basic Law V in Grundgesetze expresses identity of sense as well as identity of Bedeutung (cf. fn. 75 above).
92 The Interpretation, 328-332.
material conditional in Frege’s notation, in contemporary logical notation, and in Polish notation:

\[ p \rightarrow q \quad \neg pq \]

For Dummett, these formulas have the same essential structure and express the same thought; what changes is merely the form of representation. Dummett claims that Frege regards in the same way sets of sentences of natural language such as “Cato killed Cato,” “Cato was killed by Cato,” and “Cato killed himself.” The superficial grammar of these sentences is different. In virtue of this difference, Dummett claims, the three sentences suggest alternative decompositions of the same content; but for Frege, they all have the same essential structure, as is shown by the fact that he would translate all of them into a single formula of his logical notation (presumably, “cKc”). Coming now to the sort of cases that are our real concern here, Dummett’s suggestion is that Frege treats them in fundamentally the same way. The sentences “p” and “p&p” express, according to Frege, the same thought; and yet they are represented in Frege’s own notation by different formulas; but for Dummett this simply means that Frege’s logical notation is not yet a perfect logical notation. In a perfect logical notation, “p” and “p&p” would be expressed by a single formula, which would bring out transparently the essential structure that they have in common. Dummett suggests, for the sake of illustration, that this could be done in the following way: we could adopt a notation for conjunction in which “each conjoint is written on top of one another, as in a monogram, but each only half as bold as their unconjoined counterparts.” In such a notation, there would actually be a single sign for “p” and “p & p,” and a single sign for “p & q” and “q & p.” Dummett, to might knowledge, does not discuss the case of double negation, or of the truth-predicate, in connection with the issue of multiple analyses; but we can speculate that he would treat these cases in essentially the same way as he deals with conjunction.

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93 Ibid., 328-329.
94 Ibid., 332.
95 In spite of Dummett’s brilliant suggestion about an ideal notation for conjunction, we should be aware of the actual difficulty of devising a comprehensive logical notation that systematically avoids different signs for (what Frege regards as) the same thoughts. An analogous notational trick, for example, has been
This concludes my presentation of the way in which Dummett defends the thesis that for Frege each thought is intrinsically articulated and has a single identifying semantic structure. As we have seen, there are three types of cases discussed by Frege that appear to deny this thesis. Dummett deals with what Frege says about the first type of case by introducing the distinction between analysis and decomposition; he dismisses what Frege says about the second type of case as a mistake; and accommodates Frege’s position about the third type of case by means of a distinction between essential structure and form of representation. Now we are going to examine the opposite exegetical approach, according to which Frege admitted multiple analyzes of the very same thought and regarded thoughts as intrinsically unstructured. We will consider, in turn, the proposals respectively advanced by Sluga, Geach, and Bell.

Sluga has maintained that Frege rejected the traditional approach to logic that starts with concepts (here generally understood as sub-propositional components), construes judgments as combinations of concepts, and finally gets to inferences as combinations of judgments. Sluga has argued that Frege’s logic is founded on the thesis of the priority of what can be judged true or false, i.e. the content of complete propositions. In this connection, Sluga has stressed the importance of Frege’s commitment to the context principle and to a (Kantian) thesis about the priory of judgment. Thus Sluga attributes to Frege the rejection of an atomistic approach to logic. But at least at some points of his writings, he appears to be willing to go far beyond this (very fine) contention. Some passages suggest that Sluga attributes to Frege a variant of the contextualist position diametrically opposite to semantic atomism: propositional contents are intrinsically unstructured wholes; we grasp them as unstructured whole; and once we grasp them, we can decompose or analyze them in various ways, in order to highlights different sets of inferential relations. Thus Sluga writes that Frege regarded

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96 This terms are not used here in Dummett’s technical sense.
sentences as primarily simple, but analyzable into constituents according to the need of making and explaining inference-relations’; that Frege “reversed [the] order [of traditional logic] and began his logic with the treatment of propositions […] as unanalyzed wholes whose initially significant feature is their truth or falsity”; that he thought of the contents expressed by sentences “as initially simple and as falling apart into logically significant constituents only insofar as logical analysis requires it”; and that, according to Frege, “sentence meanings precede word meanings.” According to the view that Sluga attributes to Frege in these passages, the fact that complete thoughts are expressed by means of logically complex symbols can only be an accidental feature of thoughts—just as according to the opposite atomistic approach, the fact that sub-propositional semantic units occur within complete sentences expressing inferentially interconnected thoughts can only be an accidental feature of those basic semantic units. On the face of it, the interpretation proposed by Sluga in the previous passages provides a very straightforward of making sense of his commitment to multiple analyzes: the same thought can be analyzed in many ways because the thought is in and of itself unstructured. Each method of analysis is merely imposed by us: it does not correspond to the nature of the thought, but is dictated by our parochial need to express unarticulated propositional contents by means of structured signs that enable us to recognize more easily some of their inferential relations.

Geach follows a different strategy for making sense of Frege’s doctrine of multiple analyzes. He contrasts two models of sentential complexity: the part-whole model and the function-argument model. He argues that Frege, at its best, conceives the articulation of sentences in accordance with the functional model. The idea is that the senses of concept-words are functions that take the senses of proper names as arguments and yield the senses of a complete sentence, i.e. a thought, as values. Once the semantic complexity of sentences is conceived in this way, there is no mystery about the fact that the same thought can be expressed by structurally different sentences—just as there is no mystery about the fact that the same number can be designated by different functions,

98 Ibid., 482.
99 Ibid., 484.
100 Sluga, “Frege against the Booleans,” 86.
each of which taking the appropriate argument. This is, according to Geach, the right analogy for understanding Frege’s view about the way in which the senses of the parts of a sentence determine the sense of the whole sentence:

[…], one and the same number may be the value of one function for one argument, of another function for another argument, and of a two-argument function for a certain pair of arguments: the number 16 is the value of the square function for the argument 4, the value of the function \(4^2\) for the argument 2, and the value of the function \(\xi \times \zeta\) for the arguments 2 and 8. Nobody would now ask which one it is really […]. And this is the analogy Frege would have us bear in mind."

Geach’s explicitly applies this analogy only to the first type of multiple analyses that we distinguished above, namely the case in which we have a single linguistic expression (say “Cato killed Cato”) that we split up in different ways. However, Geach’s numerical example (where the same number is designated by “16”, “4^2” and “2x8”) invites us to apply the same analogy to the other two types of multiple analyzes: just as the expressions “4^2” and “2x8” designate the same number, so the sentences “a/b” and “D(a) = D(b),” or the sentence “p” and “p & p,” convey the same thought.

(In fact, there are good reasons to think that Geach does not want to extend the application of his arithmetical analogy in this way; I’ll come back below on these complications.) Geach recognizes that in some passages Frege commits himself to the part-whole model for the complexity of the sense of sentences; but he submits that these are infelicities that should be “charitably expounded” rather than “imitated.”

David Bell elaborates a yet different strategy for explaining Frege’s doctrine of multiple analyzes. He shares with Geach the idea that the relationship between the sense of the parts of the sentence and the sense of the whole sentence should be understood in accordance with the functional model. Indeed, Bell is completely unambivalent about the fact that the analogy with arithmetical functions should be applied to sentences without

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any qualification. However, Bell argues that in order to render Frege’s view coherent, we must disentangle two notions that Frege’s lumps together into the apparently unitary notion of “thought.” According, to Bell, Frege says inconsistent things about thoughts and the sense of sentences, sometimes leaning toward the part-whole model, other times leaning toward the function and argument mode. The inconsistency, however, should not be resolved—as Geach does—by dismissing Frege’s commitment to the part-whole model as a bare mistake. The inconsistency should be imputed to Frege’s notion of “thought.” Where Frege has one notion, we should really have two. We should distinguish between the “linguistic meaning” of a sentence, and the “conceptual content” it expresses.\(^{103}\) The former is characterized by part-whole complexity, the latter by function-argument complexity. The linguistic meaning of a sentence is made up of the linguistic meanings of its constituent parts; the conceptual content of a sentence, on the other hand, is “the value that a certain conceptual function takes for a certain conceptual argument.”\(^{104}\) Sub-propositional articulation is therefore intrinsic to and constitutive of the linguistic meaning of sentences (sentences made up of words with different linguistic meanings cannot have the same linguistic meaning), whereas conceptual content should be conceived as a “structureless whole,”\(^{105}\) devoid of “determinate, intrinsic structure,”\(^{106}\) which can be arbitrarily expressed by a variety of sentences having different linguistic meanings. So, for example, “a//b” and “D(a) = D(b)” have different linguistic meanings, but express the same conceptual content—just as the expressions “4\(^2\)” and “8 \times 2” have different syntactical and semantic structures, but denote the same number. By introducing the distinction that Bell proposes, we are supposedly enabled to retain everything Frege’s says about the part-whole structure (and intrinsic articulation) of the content of sentences, as well as what he says about the function-argument structure (and multiple analyzability) of the contents of sentences: his two commitments are not inconsistent because they apply to two distinct kinds of “content.”

While acknowledging the differences between their respective accounts, we can


also see that, at a certain level of abstraction, Sluga, Geach and Bell adopt the same exegetical approach: they vindicate the idea that, for Frege, the same thought can be analyzed in different ways (and expressed, accordingly, by structurally different sentences); but they do so by conceiving Fregean thoughts as a structureless, inarticulate wholes. A Fregean thoughts can be articulated in many ways because it is in and of itself inarticulate. For Sluga, as we have seen, sub-propositional articulation does not pertain to the nature of propositional contents, but is imposed by us in order to comply with the requirements (or limitations) of our inferential capacities. For Geach, the sense of a sentence is the value of a function, and there is no need, in general, why the value of a function should be articulate, or why its articulation should be mirrored by the articulation of the expressions that is used to designate it. For Bell, finally, the “conceptual content” expressed by a sentence is an unstructured whole that can be equally expressed by an indefinite number of sentences having different linguistic meanings, provided that each sentence is composed of words that express the appropriate combinations of conceptual functions and conceptual arguments.

Dummett, in a number of writings, has criticized these interpretations, arguing that Fregean propositional contents must be conceived as intrinsically articulated; Sluga, Geach and Bell, on the other hand, have criticized Dummett’s ascription to Frege of the idea that each must have a single, intrinsic structure. Both sides of the debate appear to me unsatisfying. At the same time, each side of the debate contains some truth. What I would like to recommend is a third position that combines the good insights of each opposite side of the debate.

The fine insight that we should retain from Dummett (and use against Sluga, Geach and Bell) is aptly expressed by his dictum that “sentences do not encode thoughts, but express them.”107 A thought, the sense of sentence, is not the sort of thing that is primarily designated by a simple or complex denoting expression; it is expressed by a sentence, and the relevant concept of expression here requires a by and large correspondence between the structure of the sentence and the structure of its content. As

107 Dummett, “More about Thoughts,” in Frege and Other Philosophers, 290. Dummett continues with the following gloss: “it is only because we can conceive of the thought as having parts corresponding to the parts of the sentence that we can distinguish expressing the thought from a systematic way of identifying it.”
the author of the *Tractatus* puts it, a sentence shows its sense. The same point can be formulated by saying that sentences are not (complex) names. As many authors and commentators have argued, Frege’s mature philosophy of language partially obliterates this fundamental distinction by construing sentences, at the level of reference, as names of truth-values. But the interpretations respectively advanced by Sluga, Geach and Bell exacerbate this mistake by construing sentences as names even at the level of sense: the complexity of the sense of a sentence is the complexity of a name that designates a certain “thought.” Sentence designates truth-values in virtue of the references of their parts, and designate “thoughts” in virtue of the senses of their parts.

This is equally the case, even though in different ways, for the interpretation proposed by Sluga, Geach and Bell. For Sluga’s Frege, the articulation that we impose on intrinsically unstructured propositional contents in order to highlight some of their inferential relations can only function, as Dummett has pointed out, as a systematic way of identifying the contents of sentences. Dummett has argued that Sluga attributes to Frege a “map-reference” model of the complexity of sentential sense. Just as we can systematically identify places on the surface of the Earth by means of a coordinate system, so we might be able to systematically identify thoughts by specifying their “inferential coordinates,” their position in the inferential network. We can identify London by means of the coordinates “51.30 N latitude, 0.10 W longitude.” Dummett’s claim is that, according to Sluga’s Frege, an articulate sentence, say “Socrates is wise,” identifies a certain thought in an analogous way, by specifying its inferential position in relation to the thoughts expressed by other sentences (say “Somebody is wise,” “Socrates has some property,” “If everybody is wise, Socrates is wise,” etc.). But as the specification of the coordinates of London is not in any relevant sense an expression of the city of London (it doesn’t tell us anything about the inner structure of London), so the specification of the inferential coordinates of a thought is not an expression of the thought: it is at most a useful way of referring to a thought. Going back to Dummett’s dictum, we can say that it is at most a useful way of encoding a thought. Moreover, the criticisms raised by Dummett imply that Sluga is not really entitled to say that we can choose between different ways of articulating a thought. Strictly speaking, each

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articulation pertains only to the *linguistic expression* that we use to identify the thought—just as a particular pair of coordinates is not a way of “articulating” or “splitting up” the city of London.

If we consider now the interpretations proposed by Geach and Bell, it is even clearer that they construe the complexity of a sentence as the complexity of a designating expression. The senses of the parts of a sentence combine into complex names of “thoughts.” Just as “The capital of Sweden” is a complex name of Stockholm, so “Socrates is wise” is, at the level of reference, a complex name of The True (as Frege actually maintained) and, at the level of sense, a complex name of a certain “thought” (as Frege *should* have consistently maintained, according to Geach and Bell). Frege was at pain to contrast the complexity that characterizes the realm of sense and the complexity that characterizes the realm of reference:

...in addition to its Bedeutung [an] expression must also have a sense, which can be a constituent of a thought. We can regard a sentence as a mapping of a thought: corresponding to the whole-part relation of a thought and its parts we have, by and large, the same relation for the sentence and its parts. Things are different in the realm of Bedeutung. We cannot say that Sweden is a part of the capital of Sweden.¹¹⁰

Geach and Bell are in fact suggesting that Frege should get rid of this contrast. According to the resulting view, the structure of a complex name of a thought in no ways reveals, or expresses, the intrinsic structure of the thought (Bell is very explicit, as we saw, that a thought does not *have* any such intrinsic structure.) As a result, Geach and Bell are not really entitled to attribute to Frege the idea that a sentence *expresses* a thought. Their accounts undermine the conditions for the application of the relevant concept of expression. Were they completely consistent, they should say that sentences *denote* some “thought.” And I believe they should also speak of “thoughts” between inverted commas, since it is questionable, as Dummett argues, that a Fregean thought (i.e. the sense of a sentence) is the sort of thing that can only be denoted and not also expressed.¹¹¹

Geach and Bell would probably protest that this is an unfair criticism of their

¹¹¹ For Dummett’s critique of Geach’s interpretation, on which I have been drawing, see *The Interpretation* 264-271.
position. Geach is well aware of the categorical distinction between names and sentences, and agrees with Dummett that Frege’s partial obliteration of that distinction (in relation to the reference of sentences) was a mistake. Therefore, he would probably resist the implication that he ends up treating sentences as names of thoughts (despite the fact that such a conclusion follows naturally from the analogy that he draws between sentences and complex singular terms in arithmetic). Moreover, some commentators have argued that Geach’s functional model of sentential complexity can actually incorporate the fundamental tenet of Dummett’s interpretation, according to which Fregean thoughts are intrinsically articulated and have a unique basic structure, which is mirrored by the structure of sentences. If that is correct, then Geach might be entitled to attribute to Frege a functional model of the complexity of the sense of sentences without having to relinquish the Fregean insight that sentences express—rather than denote—their sense. But by the very same token, Geach would then be left unable to account for the possibility of alternative equally legitimate and equally fundamental analyses of the same thought, ending up on the same side of the debate where Dummett belongs. That might be, perhaps, the right account of Geach’s interpretation. The resolution of this issue, however, is of no interest to us on this occasion. Our present goal is to look for a way of combining the right contention of each side of the debate, namely (a) the insight that the contents of sentences are essentially articulated and expressed by the articulation of sentences, and (b) the idea that the same propositional content can be expressed by many structurally different sentences in an equally legitimate way. Geach’s interpretation is not going to help us to combine these insights, regardless of whether it properly belongs to side of the debate that is occupied by Sluga and Bell (as I had been assuming throughout the previous paragraphs), or to the side occupied by Dummett (as other commentators have argued).

Bell has different grounds for resisting the claim that his approach distorts the relationship between a sentence and the thought it expresses by construing it on the model of the name-referent relation. He can say that according to his own account,

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sentences do indeed name thoughts, but *express* their “linguistic meanings”: his interpretation is then supposed to leave room for the appropriate concept of expression as applied to sentences. Frege, at a certain point of his philosophical development, split up the notion of “conceptual content” into the notions of “sense” and “reference” (in relation to sentences as well as to sub-sentential expressions); in an analogous way, Bell splits up the Fregean notion of the sense of a sentence (a “thought”) into the “conceptual content” of the sentence and its “linguistic meaning,” and is supposedly entitled to apply the concept of expression to the relation that holds between the sentence and its linguistic meaning. I can’t engage here in a full criticism of this proposal on either the exegetical or philosophical level. But I can notice that there are grounds to question whether Bell is appealing to any intelligible notion of “thought” or “conceptual content” (of a sentence). It is very unclear that we have any grasp of the notion of a “thought” except as what is expressed (as opposed to named) by a sentence. Of course we have linguistic resources for referring to thoughts rather than expressing them: we can speak, for example, of the thought expressed by the last sentence of this chapter, and of the thought expressed by “a//b” as well as by “D(a) = D(b).” But it doesn’t seem to be an accident that when we have to specify what is the thought expressed by the last sentences of this chapter, or by that pair of sentences that we have just mentioned, we will typically have to use an articulate sentence that expresses that thought. The situation here is essentially different from the case in which we speak of the number that is designated by “4^2” as well as by “8 x 2,” since in this latter case we can use a simple name (“16”) to specify the number that is designated by each of those complex expressions. This asymmetry appears to shows, pace Bell, that Frege was on the right track when he construed thoughts as essentially articulated, claiming that the part-whole relation of a thought and its parts corresponds by and large to the part-whole relation of the sentence and its parts.

I have pointed out some reasons for rejecting the approach to the issue of multiple analyzes followed by Sluga, Geach, and Bell—reasons that revolve around Dummett’s remark that “sentences do no encode thoughts, but *express* them.” Now I would like to voice my unsatisfaction with Dummett’s own exegetical and philosophical position.

Dummett’s interpretation leaves no room for the phenomenon of multiple analyses. He takes for granted that two structurally different sentences *cannot* possibly
express the same thought. The commentators who occupy the opposite side of the debate have rightly maintained, in my view, that this is a very un-Fregean doctrine which is simply imposed by Dummett on Frege’s philosophy.\textsuperscript{114} Of course, Dummett’s interpretation is very sophisticated and is not liable to any fast and easy exegetical refutation. As we have seen, Dummett goes very far in accommodating much of what Frege says about the phenomenon of multiple analyses; only in relation to Frege’s remarks about the second type of multiple analyses (the alternative “recarvings” of the same thought) Dummett flatly says the Frege committed a mistake. We cannot attempt, here, to rehearse, evaluate and, if necessary, amend the direct criticisms that have been mounted against Dummett’s interpretation. What we shall do, instead, is to undermine the motivation for Dummett’s interpretation by proposing our own positive suggesting for understanding Frege’s view of multiple analyses.

The point about which Dummett is right, as we have already remarked, is that sentences and their contents must be regarded as articulated in such a way that the structure of the sentence corresponds (by and large) to the structure of the thought it expresses. Only in this way can we make sense of the fact that sentences express, rather than denote, their sense. But there is no independent and comparably convincing basis for Dummett’s addition claim: that each thought has a unique identifying structure, so that two structurally different sentences cannot express the same thought. This second commitment appears to be compulsory only in so far as we assume that it is implied by the former: we want to hold on to the latter commitment because we assume that, if we gave it up, we would have to give up the other as well. But this assumption, I submit, is unwarranted. The two issues can be separated. And once they are separated, we can take at face value what Frege says about the internal articulation of propositions and their contents without thinking that we must therefore dismiss or accommodate what Frege says about the multiple analyzability of thoughts. The motivation for Dummett’s sophisticated interpretation—which struggles to show that whenever Frege seems to talk about multiple analyses, he is not \textit{really} doing that—fades away. Frege can say that “corresponding to the whole-part relation of a thought and its parts we have, by and large,

\textsuperscript{114} See for instance Geach’s early criticism of Dummett’s distinction between “simple” and “complex predicates”: “Review of Dummett, Frege: Philosophy of Language,” 438, 443-444; “Names and Identity,” 147ff.
the same relation for the sentence and its parts”;

and he can also declare, without inconsistency: “I do not believe that for any judgeable content there is only one way in which it can be decomposed, or that one of these possible ways can always claim objective preeminence.”

My positive suggestion is that we should attribute to Frege a view that incorporates each of the two commitments expressed by this last pair of sentences. For Frege, propositions are essentially articulated. Sentences are made up of words with a meaning of their own, and the grammatical structure of a sentence displays the structure of the content it expresses. But propositional contents can be articulated in many ways. We can rephrase a thought expressed by a certain sentence by means of a different sentence. We can put the same thought in other words. Frege vindicates this truism and he does so, remarkably, without succumbing to the temptation of construing thoughts (à la Geach, Sluga and Bell) as intrinsically inarticulate wholes that can only be designated or systematically individuated by sentences, but not expressed by them. The choice of a particular way of articulating a thought is dictated by a variety of needs, among which there is the need of making perspicuous particular inferential relations. In order to make perspicuous certain inferential relations we choose a determinate phrasing; in order to make perspicuous other logical relations, we choose a different form of expression.

By endorsing this view, as I have anticipated, Frege can also admit some limiting cases in which the most appropriate thing to do is to express a certain propositional content by means of a simple sign, devoid of sub-propositional articulation (e.g., by means of a single-word sentence such as “Stop!,” “Fire!” or “Clear!”). In all such cases, our capacity to speak an articulate language and to express by it our articulate thoughts is still operative. What happens is that the proper exercise of this capacity take on different shapes in accordance with the specific features of the particular occasion with which we are dealing.

6.5. Summary of our refined account of Frege’s contextualism

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116 Frege to Marty, 29.8.1882, in TFR, 81.
In the last few sections, I have discussed in a fairly detailed manner Frege’s view about multiple analyzes and, before that, his recognition of contextual definition. Such as discussion was announced as a “refinement” of my account of Frege’s contextualism, which I can now sum up as follows.

The fundamental feature of Frege’s contextualism, I have argued, is its capacity to integrate a contextualist contention with the recognition of the compositionality of language. For Frege, words have meaning only in the context of the significant proposition; but words have their own meanings. I have suggested that for Frege the proposition is an organic unity: it is essentially articulated into parts, but by parts that cannot be what they are except as parts of the appropriate wholes. Propositional and sub-propositional meanings are essentially interdependent: in order to have either, you need to have both. This is my central claim about Frege’s contextualism. But such an account, I maintained, needs to be further specified. We need to clarify, in particular, what it means to say that, for Frege, propositions are “essentially articulated.” In this connection, I argued that Frege’s commitment to the essential articulation of propositions is compatible with the acknowledgment of both parasitical and limiting cases. Under the first category, we have contextually defined expressions. For Frege, some meaningful sentences (of natural language) may contain words that merely pass themselves off as genuine semantic units—words that, in spite of appearances, do not have a meaning of their own. But I submitted that for Frege the intelligibility of this sort of case is parasitical on the case in which the manifest grammatical articulation of a sentence transparently displays the logical articulation of its content. Some words can pass themselves off as sham semantic units because there are words that are genuine semantic units. In addition to contextually defined expressions, Frege’s contextualism can also admit, as limiting cases, meaningful sentences that are devoid even of an apparent semantic articulation (e.g., single words sentences in natural language). The possibility of such cases follows from Frege’s view about multiple analyses. For Frege, a propositional content is essentially articulate and must be expressed by an articulate sentence; but there is no single way of expressing it which is the fundamental and complete one. The same content can be articulated in multiple ways, none of which “can always claim objective preeminence.” The appropriateness of a particular articulation is determined by the features of the situation;
and in some situations, the sensible thing to do is to express a propositional content by means of a semantically simple sign. These are limiting cases because, in order to be intelligible as what they are (i.e., as meaningful uses of language in the full-blown sense of the term), they need to be seen as the exercises of the capacity to express articulate thoughts by means of articulate sentences.

7. Names and sentences: a tension in Frege’s mature philosophy

[Sorry, I haven’t written this section yet]

8. Contextualism in Frege, Bentham and Russell: synopsis and assessment

All the main elements of the contextualist view that I want to attribute to Frege are now in place. In this last section, I want to address the issues that I left open at the end of the previous chapter. I will compare Frege’s contextualism to the forms of contextualism that I attributed to Bentham and Russell, and show that Frege’s view has the virtue of avoiding the arguably intractable problems respectively encountered by Bentham and Russell.

We can sum up the differences between the forms of contextualism that I have attributed to Bentham, Russell, and Frege with the help of the following diagram, which displays two ways of understanding the statements that “Words have independent meanings” and that “Words have meaning only in the context of the proposition”:

<table>
<thead>
<tr>
<th>1) “Words have independent meanings”</th>
<th>The meanings of words are in no way conceptually dependent on the meanings of the sentences of which they are parts.</th>
</tr>
</thead>
<tbody>
<tr>
<td>2) “Words have independent meanings”</td>
<td>Words have their own meaning, they are semantic units.</td>
</tr>
<tr>
<td>3) “Words have meaning only in the context of the proposition”</td>
<td>The meanings of words are conceptually dependent on the meanings of the sentences of which they are parts.</td>
</tr>
<tr>
<td>4) “Words have meaning only in the context of the proposition”</td>
<td>Words are not semantic units; they do not have their own meaning; only the sentences of which they are parts really have a meaning.</td>
</tr>
</tbody>
</table>
Bentham’s philosophy of language is informed by an atomistic ideal of sub-propositional meaning that is aptly described by (1): if a word is genuinely significant, its meaning is in no way dependent on its possible propositional contexts. But given his metaphysical and epistemological commitments, it turns out that such an ideal can never be satisfied. He is therefore committed to a view of language that extends to all words the unilateral form of contextual dependence that is expressed by (4). All words, according to what I called *radical Benthamite contextualism*, have the semantic status of contextually defined expressions. The very idea of sub-propositional meaning vanishes into thin air: sentences are semantic monoliths that exhibit no more than a merely grammatical articulation.

Russell shares with Bentham the same atomistic conception of the meanings of words; and, like Bentham, he recognizes contextually defined expressions. But in virtue of his different metaphysical and epistemological commitments, he does not have to extend the status of contextually defined expressions to all words. For Russell, the class of words that are contextually defined is amazingly large, but not all-comprehensive. In Russell’s system, all contextually defined expressions can be paraphrased away. Each ordinary sentence, when completely analyzed, is supposed to contain only words that enjoy the semantic status described by (1). Russell, therefore, allows for the possibility of two sets of words, respectively described by (1) and (4). But the form of contextualism that he endorses differs from Bentham’s only in scope, and not in quality, since the form of contextual dependence that he attributes to the limited class of “incomplete symbols” is the same contextual dependence that Bentham is ultimately committed to extends to all sub-sentential expressions.

Frege’s contextualism is a completely different animal. Frege rejects the whole empiricist framework that Bentham and Russell are equally taking for granted. He opposes the atomistic conception of the meanings of words that is expressed by (1), and attacks the very idea that we need to choose between (1) and (4). Bentham and Russell work under the assumption that *either* words have a meaning of their own, in no way dependent on their propositional contexts, *or* they have no meaning at all, and merely appear to give a determinate semantic contribution to the sentences in which they occur. But according to Frege, this is a false dilemma. As an alternative, he proposes a non-
atomistic conception of sub-propositional meaning. The crucial feature of Frege’s contextualism is the idea that the semantic status of words is aptly described, in the central case, by the simultaneous assertion of (2) and (3): words have a meaning of their own, but only in the context of the significant proposition. The independence that Frege is here granting to the meanings of words is not the atomistic form of independence envisaged by Bentham and Russell; and conversely, the contextual dependence that Frege assigns to the meanings of words is different from the only form of contextual dependence that Bentham and Russell can allow for—namely, the unilateral dependence that characterizes the status of contextually defined expressions. (Frege, we might say, sees a whole region of the diagram that Bentham and Russell are blind to.) Frege does also allow for contextually defined expressions, which are correctly described by (4); but only as a parasitical phenomenon.

In virtue of his rejection of the empiricist framework, Frege can avoid the problems that Bentham and Russell run into, which I referred to, in the previous chapter, as the problem of the disappearing sub-propositional meaning and the problem of the unity of the proposition respectively.

It should be clear, in the first place, that there is nothing in Frege’s view that threatens to trigger anything analogous to the dialectic of Benthamite contextualism, issuing in the denial of the very idea of sub-propositional meaning. For Frege, concept-words are not, as it were, “second best” in comparison to object-words. Qua semantic units, the two kinds of expressions are on exactly the same footing. Bentham is led by his own assumptions to regard all “names of qualities” as “names of fictitious entities,” so that every possible proposition of an articulate language must be regarded as containing at least some “misleading” grammatical expressions. But none of Frege’s commitments force him to maintain, in any analogous manner, that all concept-words can be no more than sham semantic units. Bentham is drawn into that position (from which he should also proceed, were he totally consistent, to the last stage of the dialectic of Benthamite contextualism, where it turns out that no expression can really possess a genuine sub-propositional meaning) in virtue of his atomistic conception of sub-propositional meaning, combined with his collateral metaphysical and epistemological doctrines. Frege and Russell are alike in being entitled to stop at the first stage of Bentham’s dialectic, i.e.
the stage at which we simply recognize the phenomenon of contextually defined
expressions; but the reasons for which they are so entitled are very different. Russell
manages to keep the doctrine of contextually defined expressions under control by means
of appropriate metaphysical and epistemological stipulations; Frege, on the other hand,
avoids the paradoxical consequences of Bentham’s contextualism by rejecting the very
atomistic conception of sub-propositional meaning that Bentham and Russell are both
taking for granted. Frege resists the assumption that the semantic ideal of sub-
propositional meaning is set by an atomistic understanding of the name-bearer relation.
For Frege, the meaning of a word consists in the contribution that it gives to the content
of the proposition in which it occurs. Concept-words and objects-words give two very
different kinds of semantic contributions; but they give determinate contributions, and to
that extent, they are genuine and full-blown semantic units—as genuine and full-blown as
a semantic unit can possibly be.

Frege’s anti-atomistic conception of sub-propositional meaning allows him to
resist not only the dialectic of Benthamite contextualism, but also the problem the Russell
end up with, i.e. the problem of propositional unity. Since words, according to Frege,
have the meanings they have in virtue of the role that they actually play in the expression
of intelligible propositional contents, the question of how it is possible that sub-
propositional components combine together into meaningful sentences cannot even arise.
There is no room, in Frege’s framework, for the idea of a “mere list” of significant sub-
propositional components that fail to express a propositional content—and thus no need
to construct a philosophical account that explains how a “mere list” of meaningful words
can turn into an intelligible sentence. Frege does not so much “solve” the problem of
propositional unity, but avoids it altogether by rejecting the assumptions that are required
for its very formulation.\footnote{This does not mean that Frege must deny “the possibility of lists,” say the possibility of my list for the
grocery store. I will come back on this issue in Chapter IV, where I will address extensively the question of
how a form of contextualism that is committed to the essential interdependence of propositional and sub-
propositional meaning can deal with this sort of cases.}  

There is a certain tendency in the literature to think that Frege does in fact provide
a constructive account of the unity of the proposition—an account that revolves around
the doctrine of the unsaturatedness of concepts. Moreover, such an account is generally
considered to be rather unsatisfying. The objection that is leveled against it can be
How is Frege’s account any different—and, \textit{a fortiori}, any better—than Russell’s? For Russell, the parts of a sentence name two different kinds of entities: particulars and universals. For Frege, they refer to “concepts” and “objects.” Russell is supposed to run into the problem of reducing sentences to mere lists of particulars and universals. But why should Frege be in a better position? Isn’t he reducing sentences to lists of objects and concepts? Frege says that concepts are “unsaturated” and that they can be “saturated” by appropriate objects (or by appropriate concepts of different levels). But how is this figurative talk supposed to help? Isn’t the Fregean sentence still a list of entities?\footnote{A classical formulation of this objection has been provided by David Wiggins:}

This objection would be well grounded if Frege assumed an atomistic conception of sub-propositional meanings and then tried to account for propositional unity by playing with the ontological properties of the entities atomistically designated by the different parts of a sentence. But this is not what Frege is doing—Frege is \textit{not} Russell! Frege operates under the conviction that as long as we retain an atomistic conception of the meanings of words, any attempt to account for propositional unity by means of metaphysical contrivances, no matter how ingeniously devised, is bound to come too late. The real Fregean response to the problem of the unity of the proposition does not come from his doctrine of the unsaturated nature of concepts (taken in isolation from his general philosophical approach), but from his specific form of contextualism, which recognizes an essential interdependence between propositional and sub-propositional meaning, so

\footnote{[Frege’s theory of the unsaturated nature of concepts] must encourage the protest that, even if there really exists the incomplete sort of things which Frege wants, it is still unclear how it can help to distinguish a sentence from a list to say that a sentence is unlike a list in mentioning both a complete thing and an incomplete thing. How is it that he who mentions something complete and then something incomplete thereby gets to say something? Or, in Fregean terminology, how can a designation of something complete followed by a designation of something incomplete combine to constitute a subject matter that can be judged or asserted as a truth? (“The Sense and Reference of Predicates: A Running Repair to Frege’s Doctrine and A Plea for the Copula,” \textit{Philosophical Quarterly} 34/136 (1984): 324)}

This objection is often cited approvingly in more recent discussions of Frege’s account of propositional unity. See for example Gibson, \textit{From Naming to Saying}, 5-6.
that the unity of the sentence is always already presupposed by the meaningfulness of its constituents parts.\footnote{At some points, however, Frege does seem to suggest that he regards the unsaturated nature of concepts as the \textit{source} of propositional unity. Here are some representative remarks:}

There are therefore good grounds for believing that Frege’s contextualism is not only \textit{different} from the forms of contextualism that we find in Bentham and Russell, but also more attractive as a philosophical position. In virtue of his anti-atomistic conception of the meanings of words, Frege can avoid what we have called, in the first chapter, the \textit{problematic of semantic atomist}, in both its Benthamite and Russellian form. Frege, unlike Bentham, is able to vindicate the idea that words have a meaning of their own; and at the same time, unlike Russell, he is also able to avoid the problem of propositional unity.

In the next chapter, we will begin to see how the central tenet of Frege’s contextualism—namely the idea that propositional and sub-propositional meanings are essentially interdependent—is inherited and elaborated by Wittgenstein.

\footnote{Not all the parts of a thought can be complete; at least one must be unsaturated or predicative; otherwise they would not hold together. (“On Concept and Object,” in The Frege Reader, 193)}

\footnote{ Unsaturatedness of one of the components [of a proposition] is necessary, since otherwise the parts do not hold together. (“On Schoenflies: \textit{Die logischen Paradoxien der Mengenlehre},” in Posthumous Writings, 177)}

\footnote{But the question now arises how a thought comes to be constructed, and how its parts are so combined together that the whole amounts to something more than the parts taken separately. […] \textit{It} is natural to suppose that, for logic in general, combination into a whole always comes about by the saturation of something unsaturated. (“Compound Thoughts,” in Collected Papers, 390)}

But such remarks must be read in the context of Frege’s view about the interdependence between propositional and sub-propositional meaning. If we abstract from such a context, the “account” that they provide is rather ineffectual and liable to the objection that we have just discussed. Conversely, I believe that if we have Frege’s contextualism firmly in view, it becomes less obvious why Frege should put so much emphasis on the unsaturated nature of concepts as part of this response to the problem of propositional unity. In fact, it seems quite possible to retain the crucial insight of Frege’s contextualism as a response to the problem of propositional unity, while opting for another way of elucidating the different logical behavior of the various parts of speech, which doesn’t make any use of the image of the proposition as a whole that results from the “completion” of an “unsaturated” component by an “unsaturated” one.